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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

AUGUST 29, 1932
ume 66 Number 11

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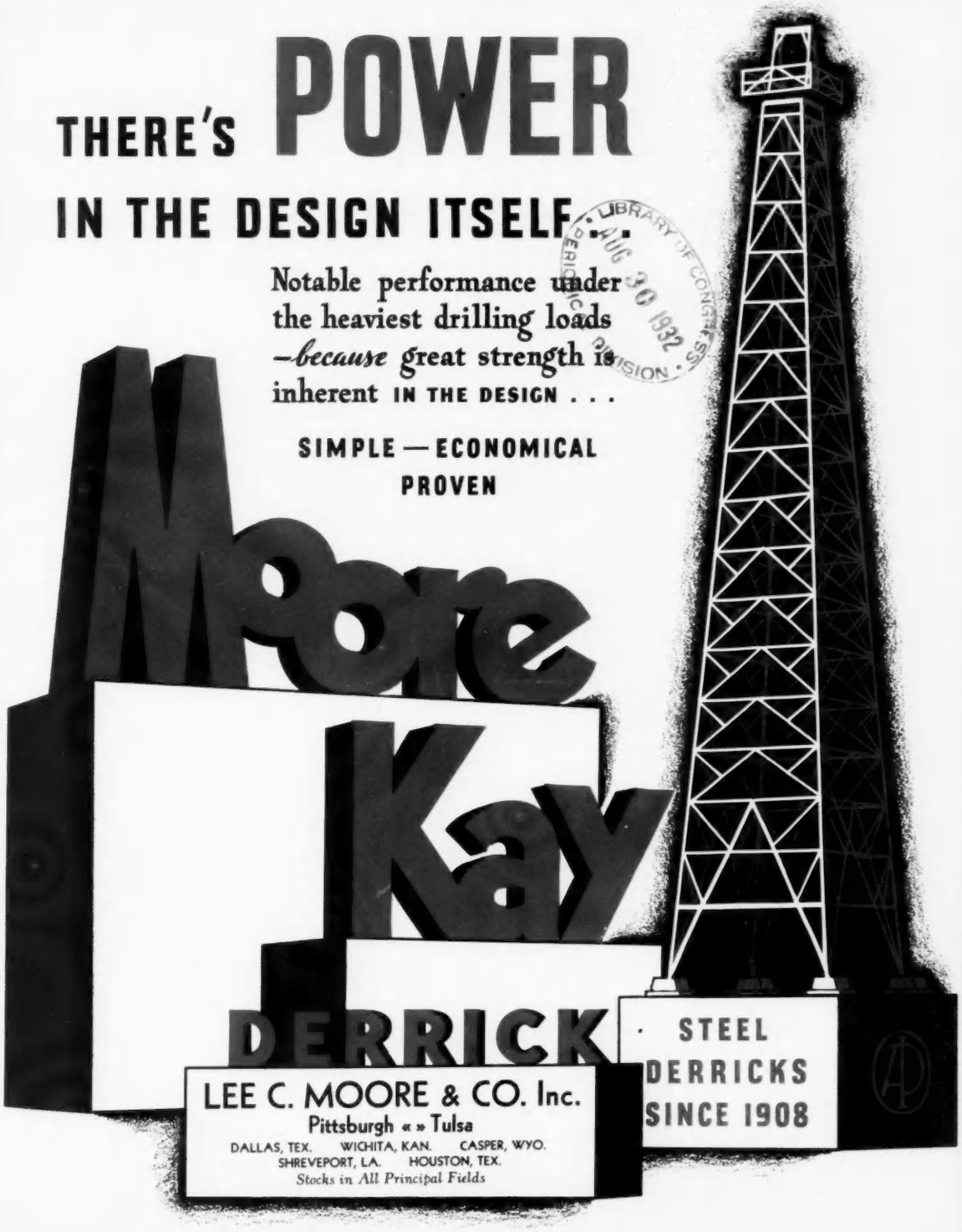

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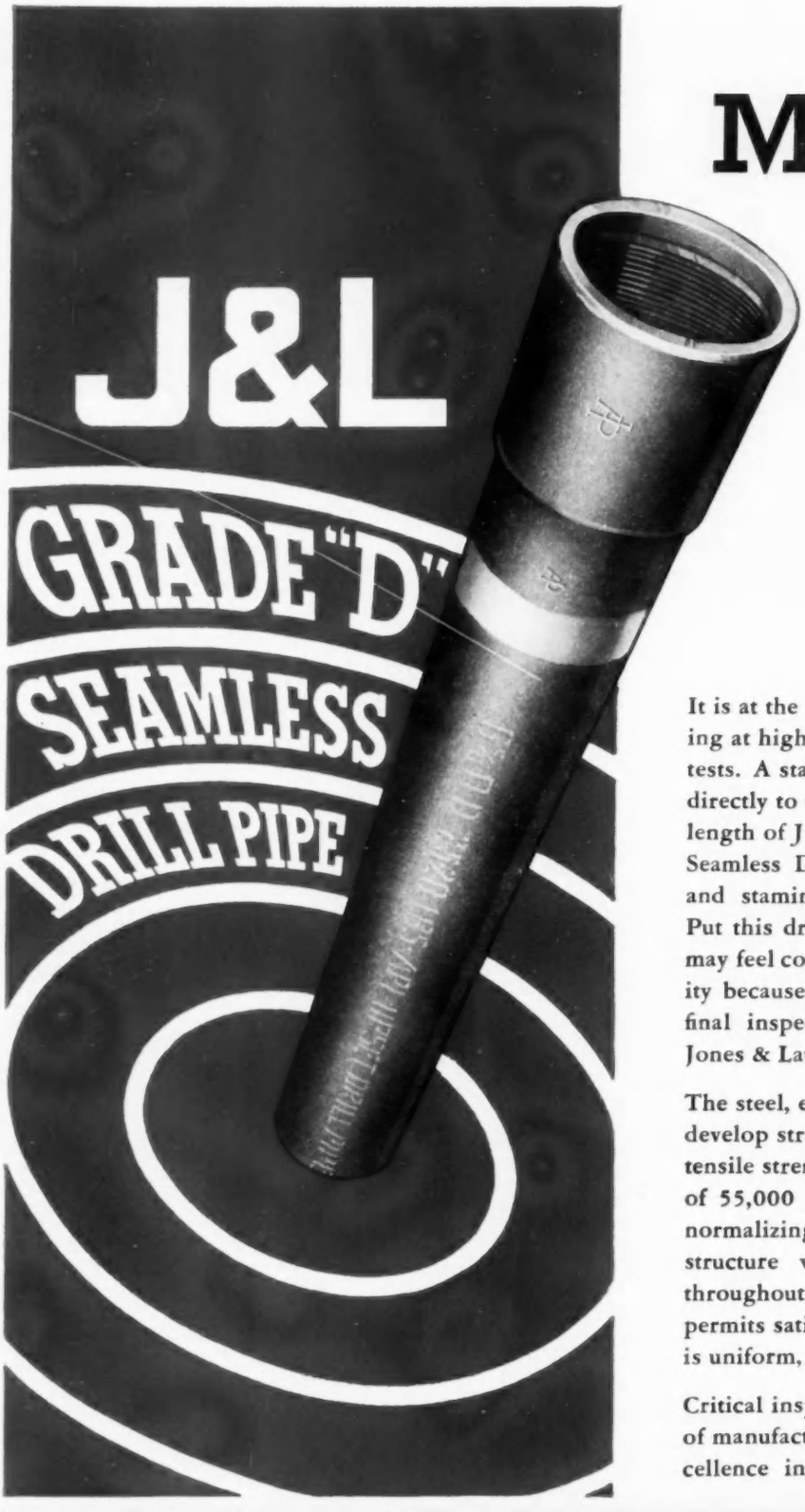

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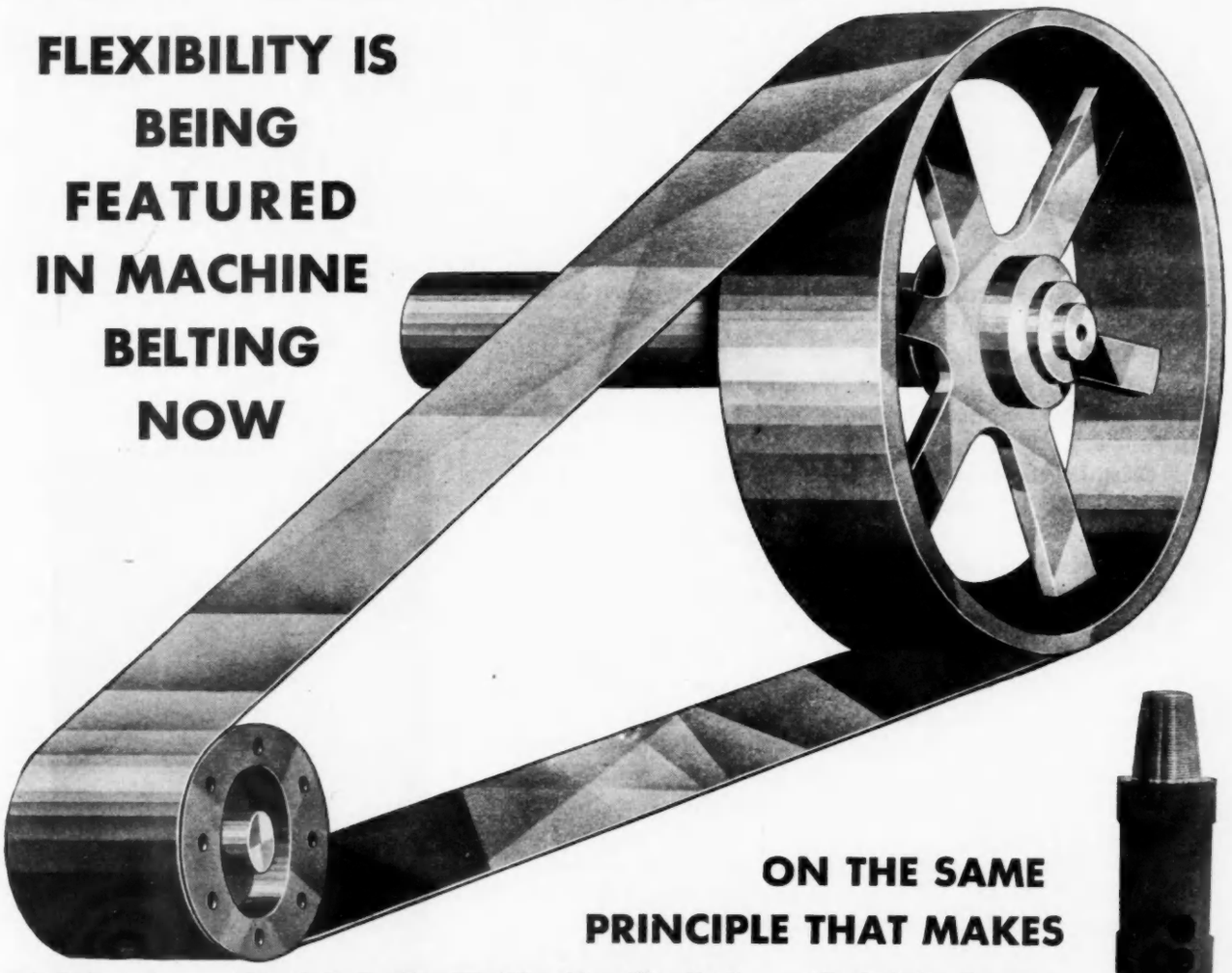
FLEXIBILITY IS BEING FEATURED IN MACHINE BELTING NOW



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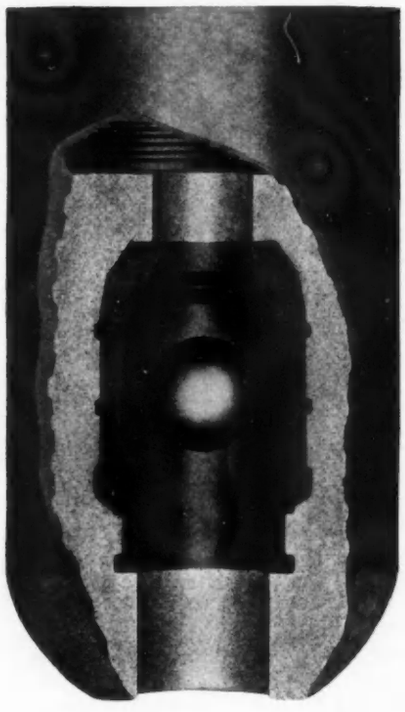

This is a 10¾ inch O. D. Baker Cement Float Shoe, cut away to show the Bakelite valve assembly, which is imbedded in concrete. Note the new rubber valve seat and the larger circulating areas. This construction is used in all Baker Cement Floating and Cementing Equipment.

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S. W. ROBINSON
Editor

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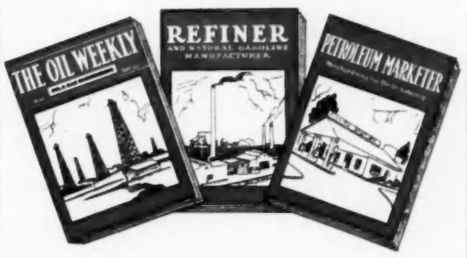

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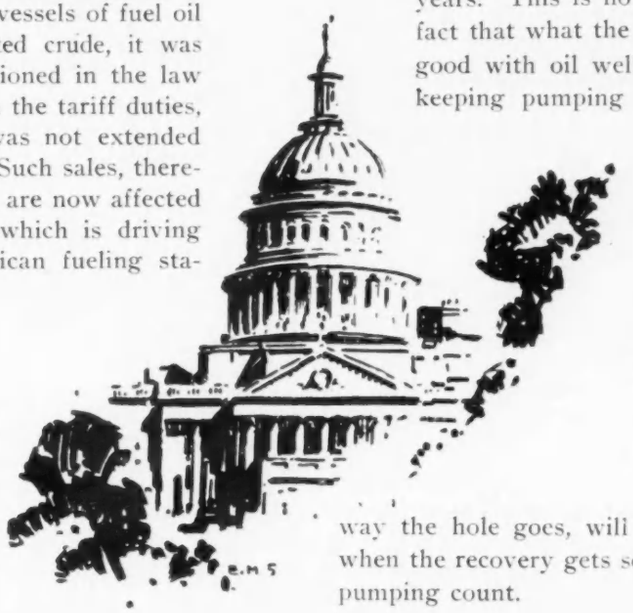
THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

Oil merchants on the Atlantic Seaboard are seriously threatened by the new tax on oil imports which, by increasing the cost of producing fuel oil from foreign crude, is driving foreign vessels to foreign ports for refueling, according to complaints which it is learned have been filed with the United States customs bureau at Washington. Representatives of the oil companies have been advised by the Bureau that no refund of the tax could be allowed on crude oil imported for the manufacture of fuel oil later sold to foreign vessels. The new revenue act authorizes refund of tariff duty on any article which is imported for the manufacture of another article which is later exported. But the courts have ruled in the Tidewater oil case that an article which is consumed in transit is not exported and does not give grounds for drawback of duty. Sales to American vessels of fuel oil manufactured from imported crude, it was said, are specifically mentioned in the law as authorizing a refund on the tariff duties, but the same provision was not extended to sales to foreign ships. Such sales, therefore, the Bureau was told, are now affected by an increase in prices which is driving foreign boats from American fueling stations.



Further complications of the interpretations of oil taxes arise in the import of naphthas which are near-motor fuels, the rate on stuff to run engines being higher than lower grades of the same general classification which goes for other purposes. Slick domestic tax evaders also are reported avoiding the federal gasoline tax by blending material which the refiner is permitted to ship without tax, with light stuff which makes the blend (made by jobbers) a passable motor fuel. Rackets will not down.

Crude Oil Stock Down in July

Pipe line and tank farm net domestic crude oil stocks east of the Rocky Mountains decreased 2,150,000 barrels in the month of July, according to returns compiled by the American Petroleum Institute from reports made to it by representative companies. The net change shown by the reporting companies accounts for the increases and decreases in general crude oil stock, including crude oil in transit, but not producers' stocks at the wells.

Early indiscretions are always paid for in later years. This is no sermon, only to stress the fact that what the moralists tell us also holds good with oil wells. Figures on the cost of keeping pumping wells pumping have been checked against the crookedness of the holes. Just as might be expected, the more crooked the hole the more it costs to pump. How much more is illuminating and should cause still more operators to think of the future with a realization that money saved by rushing the drill without regard to which way the hole goes, will be many times lost again when the recovery gets so low that pennies spent on pumping count.

Page 24

Metering Crude Oil . . .

WITHIN the past several years there has been growing recognition in the petroleum industry of the need for meters which will successfully measure crude oil.

▪ Such metering has offered serious obstacles, however, and progress in solving the difficulties has been slow. Many of those obstacles, in fact, remain yet to be solved. But others have already been wholly or partially overcome, with the result that crude oil meters are being given considerable practical application.

▪ Recognizing the interest which has arisen lately in the subject of metering crude oil, particularly since the recent issuance of an order by the Texas Railroad Commission requiring installation of meters on all pipe lines moving crude oil out of the East Texas field, **THE OIL WEEKLY** will present a series of articles, prepared by members of its editorial staff, giving a comprehensive discussion of the subject.

Watch NEXT WEEK for the opening article on this LIVE subject.

Completions for the week ending August 20 show an increase over the previous period, both in number of wells and oil wells, but the amount of potential was not increased in proportion. Permits for new wells in Texas compared with wells completed shows a further loss of the volume of work now under way in that state, 252 wells having been finished and only 206 started. As Texas this year has over 80 per cent of the drilling in the United States, the drop is significant. Incidently, the volume of drilling this year has been running so far ahead of last year that the new wells for 1932 soon will reach the total for all of 1931. Page 21

Change in Tax Law

Complaints reaching Washington on inequities of the present revenue law (one inequity being that the expected revenue is not apparent) has revived the idea of a general sales tax. It is assumed that a general tax would be a uniform rate which would mean a change for the petroleum industry; general commodities would not be taxed such percentages as are gasoline and lubricating oil, so they would be equalized and lowered. If justice is considered, pipe line tariffs would be no more taxed than are rail and ship rates. The oil industry is so dealt with in present schedules that it can look forward to any change as a probable easing of the burden. Page 15.

Refiners reported to American Petroleum Institute that during the week ending August 20 they had reduced their runs to stills by 35,000 barrels to 2,128,300 barrels daily. That was a close guess on how much was needed for the week, as it produced only 23,000 barrels more gasoline than was shipped. Refiners' stocks were depleted only 222,000 barrels but stocks in other hands and in transit show to have been reduced by 1,119,000 barrels. Page 21

Imports of crude oil and fuel oil into the United States for the week ending August 20 were down from the previous week and also below the four-week average, amounting to only 556,000 barrels, or 79,429 barrels daily. During the same week movement of California refined products to the East Coast amounted to 450,000 barrels.

The Oil Man's Calendar

SEPTEMBER

14-16 *30th Annual Meeting, National Petroleum Assn., Atlantic City, N. J., Hotel Traymore.*

21-22 *Ohio Petroleum Marketers Association, Columbus, Ohio, Deshler-Wallick Hotel.*

21-23 *7th Annual Meeting North American Gasoline Tax Conference, Philadelphia, Pennsylvania.*

OCTOBER

1 *American Institute of Mining and Metallurgical Engineers, Petroleum Division, Ponca City, Oklahoma.*

3- 7 *National Safety Council, Washington, D. C.*

4- 6 *Society of Automotive Engineers, Transportation Meeting, Toronto, Canada.*

10-14 *Annual Convention, American Gas Association, Atlantic City, N. J.*

11-12 *Kentucky Petroleum Marketers Association, Louisville, Kentucky.*

? *American Society of Mechanical Engineers, (Fuel Division), Chicago, Illinois.*

NOVEMBER

10 *California Natural Gas Association, Los Angeles, California.*

15-17 *Thirteenth Annual Meeting, American Petroleum Institute, Houston, Texas, Rice Hotel.*

DECEMBER

5- 9 *American Society of Mechanical Engineers, New York, N. Y.*

? *Rocky Mountain Oil and Gas Association, Great Falls, Montana, Rainbow Hotel.*

Officers Expected To Check East Texas Violations *After Elections*

TYLER, TEXAS.

LENIENCY shown proration violators in the East Texas oil field by enforcement officers for several months prior to the state primary election held August 27 is expected to be greatly diminished regardless of the outcome of the contests. Elective officers responsible for the hired state employes enforcing the proration and conservation laws have been lax while soliciting votes for re-election. Whether these officers are re-elected or not they will remain in office through the balance of the year, and have definite plans of correcting the general practice of over-producing wells by certain groups of companies and operators in the meantime, providing no court interference occurs.

Most violators are anticipating a concentrated drive by enforcement officers before the end of the present week, with possibilities of the widely known Texas Rangers being temporarily detailed to aid in ferreting out well owners and crude buyers involved in illegal practices. Brokers of crude in spot quantities who buy and sell oil considerably below the posted price of 98 cents also expect such a drive being conducted, and have hiked their asking price, or in some instances have withdrawn for fear of arrest. Several crude skimming plants within the field have lately adopted pipe line facilities for receiving the bulk of their oil in lieu of making purchases from tank truck operators. In making this switch an accounting is made for all oil received.

Upholding of the current posted price in this field and possibly the entire Mid-Continent after the passing of the summer peak demand for gasoline depends largely on the stopping of the over-production practices of some lease owners. Enforcement authorities have been repeatedly advised to this effect, and have given assurance that the menace will be removed to the best of their ability now that the election is out of the way.

Prosecution of the numerous companies and individuals that have been indicted for alleged oil thefts, or made defendants in injunction and penalty suits for exceeding proration allowances of one or more wells in the East Texas field, or any other officially prorated field in the state remains to be written into the court records. The state has been on the defense on all court tested cases. Repeated violations in the East Texas field is gradually forcing the issue to a head, and it is believed that an effort will be made in the near future for the first time in prosecuting the guilty persons. Providing a motion for a postponement is not granted, a trial is scheduled to be started next week at Marshall, Texas, of a group charged with defrauding royalty interests in connection with the operation of a Gladewater townsite well.

While these promises of a clean-up on violators in East Texas are being made, the state is to again go on the defense of its rights to regulate production in this particular field at Houston September 13 before a three-judge federal court. This case is to try the Constantin-Wrather et al injunction suit against the Texas Railroad Commission on its merits. The above plaintiffs lost in their efforts to obtain a temporary injunction in federal court last month, but the judges authorized a new hearing to try the case on its merits. A new line of attack on the commission's legal rights is expected to be brought out should the scheduled trial take place, and a number of additional plaintiffs have been added to the original list.

Russell Co. Defendant In Proration Violation

Austin, Texas. — Restraining orders were preferred against the Russell Petroleum Corporation and W. H. Matthews, lease owners in the Kilgore section of the East Texas oil field, against violating proration rules of the Texas Railroad Commission. Penalty suits were also filed against the defendants by representatives of the Attorney General in District Court here August 25.

State Gets Restraining Order Against Nine *East Texas Operators*

Austin, Texas.—Restraining orders to prevent over-producing of wells in the East Texas oil field have been dismissed against three of the nine groups of companies and individuals designated by petitions filed by the Attorney General's department on behalf of the state in Ninety-Eighth District Court here August 19. The East Texas Oil & Refining Company, London Petroleum Corporation and Shell Petroleum Corporation were relieved of the court order after a conference with state officials.

Others named in the new batch of restraining orders included: Bobby Manziel, Gladewater lease owner; R. W. Porter; C. F. Greenwood, Fort Worth; Hill Reade, Inc., Dallas; Mission Oil Company, Tyler; V. O. E. Refining Company, Gladewater; and V. O. E. Wright, B. E. Wright and P. Middleton. The latter three were enjoined as owners of the V. O. E. Refining Company, from purchasing oil not produced in accordance with the proration orders of the Texas Railroad Commission.

Charges of exceeding the proration allowable were preferred by Assistant Attorney General Fred Upchurch from information supplied by representatives of the commission.

A dismissal of charges against London Petroleum Corporation was approved by the commission August 22 upon being notified that a receiver had been appointed for the property, and that this change in management would forestall the necessity of a restraining order to prevent over-production.

East Texas Oil & Refining Company, largest refiner and owner of approximately 128 wells in the field, was relieved of the court order when Freeman W. Burford, president, appeared before the commission August 22. Burford stated that the over-producing of a well on the company's Mitchell lease, Kilgore area, was done without the sanction of officers of the company. He advised that the violation occurred during his absence from the state, and upon learning of the act orders were issued to shut the property in until the allowable balanced with the excess. Burford has been a staunch supporter of proration and an active worker on

conservation programs. These facts were taken into consideration by the commission in ordering the injunction dissolved.

Shell Petroleum Corporation was designated as a violator largely on circumstantial evidence, having been charged with withdrawing the proration allowable of a lease from corner wells on a six-well property. This company's J. S. King 62½-acre lease, W. P. Chisum survey, Kilgore area, was alleged to have been produced in the above manner by the lease man in charge. Officials of the company have an exceptionally good reputation in the state for approving and abiding by all proration and conservation rules, and have been subjected to considerable embarrassment by the court order. A neighboring lease man reported that the company was flowing its corner wells under choke over a long period, and omitting daily withdrawals from the three inside locations. Officials of the company have advised the commission that the three corner wells are equipped with large size tubing, and because of their presence near the water zone are flowed through small choke as a safety measure against water. The three inside wells on the lease are equipped with a combination string of 1- and 1¼-inch tubing, or a taper string, and are flowed each morning in less than an hour. Slow withdrawal of oil through taper tubing creates paraffin trouble, and for this reason the wells are "stop-cocked", according to officials of the company.

Oklahoma Military Rule Upheld By Judges *in Russell Case*

Oklahoma City.—The right of Governor William H. Murray to rule oil proration by military force was upheld in district court Wednesday, August 24, when a three-judge tribunal refused Russell Petroleum Company an injunction which would have prevented military occupation of two properties seized because of alleged illegal production. In the decision which was announced by Judge Sam Hooker, it was stated "we have reached the conclusion that it does not lie within the power of our district court to supervise the conduct of the governor and his militia, and the orders having been issued by the corporation commission, and the proclamation of the governor having been issued ordering enforcement of these orders, this court cannot interfere, and for that reason the evidence is incompetent and immaterial."

Oklahoma City.—Investigation of alleged stealing or bootlegging of oil in the Oklahoma City field led to the naming by Cicero I. Murray, of 10 companies as being responsible for alleged illegal production of more than 1,200,000 barrels of oil during the first five months of this year. Lieut. Col. Murray said that he had filed data with proration attorneys for this period and would file a supplemental report covering June and July. Later he withdrew the name of one company pending further investigation. Murray gave but few details concerning the report but stated that it contains the names of refining and transporting companies as well as those of producers. From rumors which have been circulated during the past few months it is likely that a majority of the names will be those of transporting and refining companies since it would not be possible to produce illegally a substantial amount of oil without the aid of a refining and transporting company.

A second stage in the battle which has been recently waged is the district court hearing in the case of Russell Petroleum Company, upon whose leases it is alleged two secret pump stations were found. Despite a threat by Governor William H. Murray to order the arrest of anyone interfering with military control of the field the three-judge court took jurisdiction of Russell Petroleum Company's petition which seeks an injunction to prevent military occupation and shut down of the two leases upon which pumps were said to have been found. Late in the week Governor Murray ordered Cicero I. Murray, director of military proration in the field, to disregard a subpoena to appear as a witness in the injunction hearing. At the same time he ordered two national guard officers to appear in civilian clothes as citizens instead of in the role of proration enforcement officers.

Commenting on the Governor's stand, district judge Sam Hooker said, "the governor can take care of his business and I'll take care of mine."

Decision of the court to hear evidence came after hours of wrangling between D. A. Richardson, proration attorney, and Sid White, attorney for Russell Petroleum Corporation. It is White's contention that the two properties were seized without "due process of law" and that no corporation commission order was issued in their seizure. Governor Murray assailed the court's ruling to hear the evidence, saying, "Any judge knows, and any good lawyer knows that no court in the land can enjoin the military arm of the governor."

Further evidence will be presented during the next few days. Proration attorneys were granted a continuance over the objection of White. Richardson, in pleading for the continuance, said the defense would show that proration orders were issued, that there were violations and that the district court had held it had no jurisdiction to stop production in violation of proration orders. He said the governor then issued his executive order establishing military control of the wells and that he acted within his authority in so doing.

Accountants to Assist In Checking Reports

Dallas, Texas.—Services of a large number of accountants experienced in handling crude oil and pipe line department records have been tendered by major and independent companies to assist the American Petroleum Institute's recently appointed committee to investigate rumored violations of proration rules by leading crude purchasing and pipe line companies serving the East Texas field. J. G. "Jack" Pew, Sun Oil Company, Dallas, chairman of the committee, called a conference of his committee and the accountants made available for the auditing work here August 24. Accountants representing an independent and major company will be paired in the work, which will be supervised by the committee.

The personnel of the investigation committee includes: Pew, S. A. Guiberson, Jr., J. F. Lucey and Col. L. S. Davidson, commander of National Guard forces on proration duty in the field. J. R. Parten, president Independent Petroleum Association of Texas, resigned from the committee late last week because of not being able to give the proper amount of time to the assignment. This vacancy will probably be filled by the appointment of another well known independent operator.

The audit will cover the activities of the purchasing and pipe line companies during June and July, as the rumored violations were supposed to have been most general during these two months. All large companies and some of the smaller units in the field have agreed to submit their records to an audit. The findings of the committee will be made direct to the American Petroleum Institute. It is expected that more than a month will be required to make the investigation.

Oklahoma-Kansas *to Bid for Next Big Play* For New Reserves

FLOYD SWINDELL
Staff Representative

DISCUSSION as to where the oil industry will turn in its next search for new production may seem premature at this time in view of the general impression regarding known reserves. Most certainly no large amount of new development will be warranted as long as pools such as East Texas, Oklahoma City, and Kettleman Hills remain under rigid proration. Yet the action of many of the major companies indicates that they are not going to remain idle until demand definitely exceeds the known reserve. When the next drilling campaign will take place remains a matter of long distance guessing. Action of land, lease and geological departments, however, does yield some information as to where the next activity may be expected.

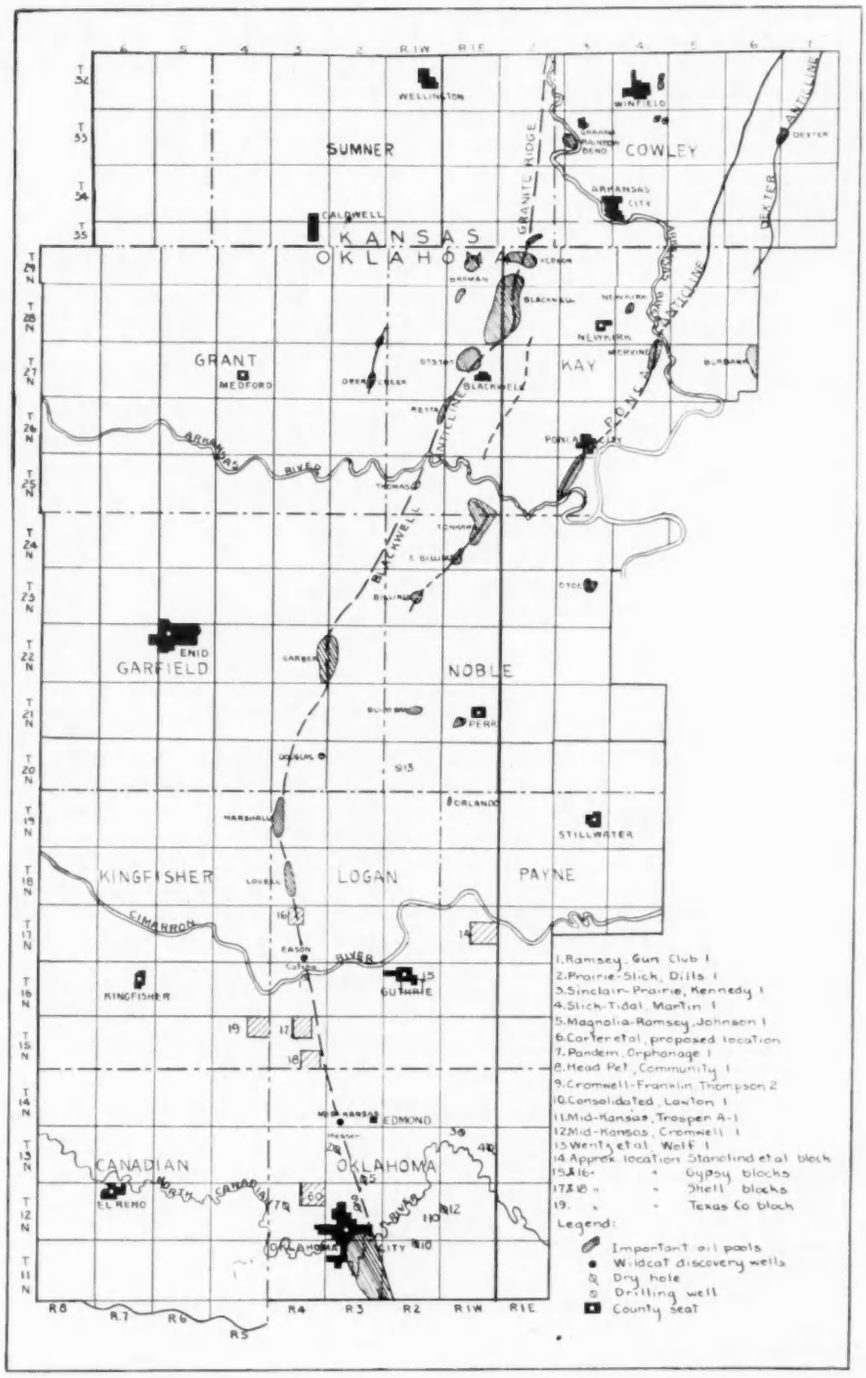
Oklahoma has discovered no pool of major importance since 1928 and logically should be among the first oil producing areas to need new production when the proper economic balance has been reached. Outside of the Oklahoma City pool, no area of great proportion has been discovered since 1926 and 1927 when Greater Seminole was being developed. Pools of that district, which at one time reached a daily peak of more than 500,000 barrels, have now produced in excess of 500,000,000 barrels and are reduced to an estimated potential of approximately 245,000 barrels daily. It is exceedingly doubtful that they could produce at their potential rate for more than a few days if opened to capacity. There remain in the Seminole district several areas of considerable importance but it is not generally believed that production of major importance will be discovered under any of the known undeveloped structures.

There is a large amount of activity in the districts of eastern and northeastern Oklahoma, especially in Creek County. These districts will continue to be active for some time since production is relatively shallow and operators with limited finances find them attractive. Here is another district which in the aggregate will produce a large quantity of oil but the amount which will be available at any one time probably will not be a market factor. It then seems that the next serious attempt to find new production on a large scale in Oklahoma must be expected in the western, central, or southern portions of the state.

Several tests in the extreme western portion of the state have shown an exceedingly thick geological section and the area remains very much an unknown quantity. Much has been said regarding its oil possibilities and there is but little doubt that at some time in the future it will be fully developed and production of importance will be found. However, the present economic situation is not conducive to development of an unknown area which more than likely will be deeper than the Oklahoma City pool throughout its area.

Southern Oklahoma

Southern Oklahoma, in the light of big production, presents a similar problem;



Showing probable structural trends, important pools, dry holes, wildcat drilling wells, and approximate location of some of the major oil company blocks in north central Oklahoma.

subsurface geological conditions are complicated and sands which should be of major importance probably lie at depths ranging from 6500 feet downward under the present known structures. Here again is a district which contains almost unlimited possibilities but which more than likely will be held up several years due to the economic situation.

The accompanying map shows the structural trend in the north and central portions of Oklahoma. Interpretations of trend in southern Kansas and north central Oklahoma are by Clark and Cooper with southward extensions by the author. The area, which extends from Sumner and Cowley Counties, Kansas, southward through Kay, Grant, Noble, Garfield, western Payne, eastern Garfield, eastern Kingfisher, Logan, Oklahoma and Canadian Counties, has long been one of great popularity both with oil companies and lease brokers. Development of the Vernon, Blackwell, South Blackwell, Otstot, Retta, and Garber pools in a northeast-southwest alignment led to the general belief that the old Nemaha Granite Ridge of Kansas extended to the southwest and that the structures upon which these pools are located are related to the ridge. Development of the Marshall and Lovell pools in Logan County indicated that the ridge might be traced even farther. Table 1 is a record of the pools of northern and central Oklahoma, showing date of completion of the discovery well, name and depth of the producing sand, and other data pertinent thereto.

The first 11 pools listed in Table 1 apparently are on the Blackwell-Granite Ridge trend; Newkirk, Tonkawa, Billings, and Bu-Vi-Bar appear to be roughly on the same line upholding; and the latter four on the Ponca Anticline although some doubt exists regarding the extension of this line of folding southwest from the Ponca City pool through Perry and Orlando.

From the information now available it seems logical to extend the Blackwell-Nemaha Ridge fold through Marshall, Lovell, and Oklahoma City and possibly south into Cleveland County. Garber and Oklahoma City are very similar in that they both produced from structures apparently resulting partially through overdraping on an old land mass and through faulting. Wilcox sand is found only on the flanks of both structures. With this assumption it then seems logical to suppose that structures such as the Ponca and Dexter anticlines may extend southward, roughly paralleling the granite ridge and that some structure probably exists between the two as is evident in the northern portion of the area.

In the area between Lovell and Oklahoma City very little acreage remains unleased. During the Oklahoma City campaign major companies were active in taking large solid blocks and checkerboarding throughout the area. Little of this has been released. A considerable amount of geophysical surveying has been done and some of the structures so located have been checked with the core drill.

In attempting to prophesy where the next effort will be made to locate important production in Oklahoma it does not seem a long shot to point first to the area between Lovell and Oklahoma City and next to the area lying to the east of this line. Three important wildcat tests are drilling and others are rumored for start within the next few months. Table 2 summarizes important wildcat dry holes in Oklahoma and Logan Counties and includes the three drilling wells.

TABLE 1

Pool	Discovery Date Original Sand	Depth of Producing Sand	Name of Producing Sand	Initial Production Barrels
Vernon	9-20-25	3393-3404	Miss. Ls.	125
Blackwell	1914	3365-3367	Wilcox[1]	600
Otstot	1920	3425-2465	Wilcox[2]	50-800
Retta	1925	2640-2700	Tonkawa[3]	100-800
Thomas	1924	2055	Thomas[4]	250
Garber	1917	1130-1156	Hoy[5]	200
Marshall or Roxana	1927	5983-6086	Wilcox[6]	2450
Crescent or Lovell	1926	4059-4080	Tonkawa[7]	50
Eason-Cotcha (One well pool)	11-12-30	4919-4942	Layton	680
Mid-Kansas, Messer (One well pool)	9-15-30	6766-6771	Wilcox	456
Oklahoma City	12-4-28	6355-6498	Arbuckle[8]	5000
Newkirk	1916	3350-3390	Miss. Ls[9]	200
Tonkawa	1921	2658-2660	Tonkawa[10]	1000
Billings	1917	2121-2136	Hoover	250
Bu-Vi-Bar	1926	1894-1902	Uncorrelated	130
Mervine	1913	1000-1025	Mervine	100
Ponca City	1917	1500-1530	Hoover	120
Perry	1922	1587-1595	Vann	Gas
Orlando	1926	4830	Misener	80

[1] Arbuckle lime subsequently yielded wells of 100-1000 barrels initial.
[2] Oil subsequently found in Arbuckle lime at 3640 to 3645 feet.
[3] First Wilcox sand well completed September, 1926. Depth 3550-3600 feet.
[4] Major portion of production from Wilcox sand at 3955 to 4046 feet.
[5] Arbuckle lime yielded wells as large as 27,000 barrels initial. Production was found in eight other horizons below the Hoy sand. Granite found at 5462 feet.
[6] Layton sand at 4580 to 4730 feet produced gas up to 42,000,000 C.F., initial.
[7] Wilcox sand lies at 6200 feet below the surface.
[8] Wilcox sand at 6300 to 6500 feet is most important production.
[9] Granite found at 4800 feet.
[10] Wilcox sand at 4065 to 4390 feet yielded initial production up to 10,000 barrels.

Shell to Move Oil to Gulf for Canada

Tyler, Texas.—Shell Pipe Line Corporation has contracted to transport a portion of the East Texas crude produced and purchased by British-American Oil Producing Company from the field to the Gulf Coast where loadings will be made aboard tankers for delivery to Canadian refineries affiliated with the latter concern. Shell Pipe Line Corporation is building a four-mile six-inch lateral line off its 10-inch trunk line opposite the south end of the East Texas field to tie into a pipe line gathering system operated by the Toronto Pipe Line Company, a subsidiary of the British-American Oil Producing Company. The latter concern is also using the facilities of other major carriers in moving oil to the Coast, but is forced to withhold water shipments during the winter months because of the Canadian ports being ice bound.

TABLE 2

Important Dry Holes in Oklahoma and Logan Counties, Oklahoma

Company and Farm	Ref. No. On Map	Location	Elev.	Top Checker-Board Ls.	Top Oswego	Top Violan	Top Wilcox	Total Depth and Formation at T.D.
Ramsey, Gun Club	1	NW NW NE 10-16n-4w	1052	....	....	....	....	Spud 8-16-32
Prairie et al, Dills	2	CSE NW 17-13n-3w	1150	5417	6150	6555	6800	6822 in Wilcox—dry
Sinclair Prairie, Kennedy	3	CSE NW 4-13n-1w	1045	....	....	....	....	Drlg. 4200 8-23-32*
Slick-Tidal, Martin	4	NWc 13-13n-1w	1054	....	5235	....	6015	6650 in Arbuckle
Magnolia et al, Johnson	5	NE NE SW 35-13n-3w	1141	5425	6168	....	7133	7212 in Wilcox
Carter et al proposed location		probably in 12-12n-4w						
Pandem Oil, Orphanage	7	N½ NW NE SE 17-12n-4w	1326	6115	....	....	....	6700 undetermined
Head Pet. Synd., Community	8	SE NW SE 34-11n-3w	1325	....	....	....	....	5409
Cromwell-Franklin, Thompson	9	SW SW NE 15-12n-3w	1151	....	....	....	....	4575**
Consolidated, Lawton	10	NE NE NW 3-11n-2w	1270	5325	6233	....	....	6903 in Simpson
Mid-Kansas, Trosper "A"	11	SE NE SE 24-12n-2w	1238	5105	5976	6610	6962	7375 in Simpson?
Mid-Kansas, Cromwell	12	SE SE SW 18-12n-1w	1262	5160	6010	6620	6905	6947 in Simpson
Wentz et al, Wolf	13	CSE SW 17-20n-2w	....	....	....	....	....	Drlg. 4025 8-15-32

*Had top of Pawhuska lime at 2495 feet below surface. **Cromwell-Franklin 1, SW NE NE 15-12n-3w, had Wilcox sand from 6938 to 7130 feet and was abandoned in green shale at 7180 feet with casing collapsed.

2,019 feet in 12 hours with one

MERRITT GOLD HEAD BIT

. . . . and the hole was in perfect gauge. That's the all-time East Texas record made soon after the field was discovered — 2019 feet in twelve hours with one bit! Location of well on request, and signed statement of driller if you wish. But that's only one of the numerous records established by Gold Head Bits.

Merritt All-Formation Gold Head Bits are set with the highest grade tungsten carbide inserts and facing that bite savagely into hard formations. Built on a body that guarantees a straight hole. Frequently called on to straighten crooked holes—and it has yet to fail.

The whole story is set forth in an interesting folder ready for mailing to any oil man who wants to be convinced . . .

MERRITT TOOL COMPANY

KILGORE, TEXAS, U. S. A.

Shops at Kilgore, Carlisle and Van, Texas

Texas University Again Up In the Air Over Royalties *from Big Lake*

AUSTIN, Texas.—Another series of suits against the operators of the Big Lake field is threatened following a recent meeting of the Board of Regeants of the University of Texas.

Judge R. L. Batts, chairman of the board, reported that on 90,000,000 MCF gas, produced in the field prior to May 31, 1932, the University received for its permanent fund, royalties of $141,691.61.

This amount of gas delivered in Austin, would have sold to consumers for $60,-750,000 at current rates, Batts stated.

The University receives one-eighth of one-third of the value (sales price) of gasoline from the gas. On the product made from 1000 feet for which an Austin consumer would pay 75 cents, the university receives a royalty of .00157.

Batts' statement was a predicate for a request which is to be made to the attorney general covering the following five points:

1. To secure action by the Texas Railroad Commission fixing the maximum gas-oil ratio for the field.

2. To consider if the university is being properly paid for the gasoline produced.

3. To institute suit for royalty not paid, and for royalty only partially paid on gas sold.

4. To consider if recovery can be had on gas used in producing oil, and then burned or blown into the air.

5. To institute suit for gas used in excess of that required for the lifting of oil, in case it should be determined that the lessee may use, without cost to itself, all of the gas necessarily used in the production of oil.

In a statement to the board, Batts was quoted as follows:

"I am indebted to Mr. Tapp of the auditor's department of the state for the following figures:

"Up to May 31, 1932, gas had been produced and measured in the university Reagan County oil field as follows:

"By Group One Oil Corporation, 49,-871,183 MCF.

"By Big Lake Oil Company, 40,507,278 MCF.

"A total of 90,378,461 MCF.

"This is not all the gas produced but that part of it run through casinghead plants. Oil produced since May 31, 1932, would probably add about 8,000,000 MCF.

"The 90,000,000 MCF to May 31, 1932, has had extracted from it, gasoline to the extent of about 8/10 gallons per MCF. On the gasoline extracted the university has been paid royalty, one-eighth, on the basis of three cents per MCF to October 31, 1930, and thereafter one-third of the value from November 1, 1930, that is to say, the University has received in the latter period one-eighth of one-third of the value (sale price) of the extracted gasoline. The University has also received royalty on the small amount of residue gas sold, royalty being paid on the basis of one-third of the sales. Some sale of residue gas have been made on which the University has received no royalty.

"The total receipts by the University from the 90,000,000 MCF produced to May 31, 1932, is $141,691.61. This amounts to $.00157 per MCF. That is to say, the University receives one cent for every 6450 cubic feet, or $1 for every 645 MCF.

"The actual value of the gas taken from the University land is difficult to determine. The following facts may be of some service in estimating the value. The citizens of Austin are paying for the gas $.75 per MCF (there is 10 per cent discount, which is more than offset by a service charge). With the discount off, the value of the gas turned loose in the University field, measured by the charge to the citizens of Austin, would amount to $60,750,000. The University recently negotiated with one of the gas companies for gas to use at the power plant, and the offer was 16 cents per MCF. At this rate, gas wasted in the University field would have a value of more than $14,000,000, 100 times the amount received by the University.

"The board has been making efforts for more than a year to reduce this waste. The attorney general's office and the railroad commission have cooperated and the interested companies have done something to that end. The latest reports I have received, however, indicate very discouraging results, and more definite action will be required if one of the most valuable assets of the state is to be conserved.

"The latest report I have shows that on August 5, 1932, gas was produced from the wells in Reagan County fields to the amount of 108,609 MCF. On that day there was gasoline produced therefrom to the amount of 87,339 gallons. The gasoline sold for less than two cents per gallon. The University gets one-eighth of one-third, or $70, for its part of the proceeds of more than 100,000 MCF gas.

"I am told that the city of Austin uses about 1,000,000 MCF per annum. This could be supplied in less than 10 days by the University fields. At the rate indicated, the University would get less than $700, and the citizens of Austin would pay $675,000.

"I am not sure as to what can be done. I am very sure that the waste cannot be justified, and should not be tolerated.

"The leases under which the companies operate provide for royalty on the oil produced and on the gas produced and sold. It is silent as to gas produced and not sold. It is contended that the most useful function of the gas is to lift the oil. The leases contemplate that the expense of production is to be borne by the lessee. Even if under the contract it be permissible to turn loose or destroy so much of the gas as is necessarily used in lifting the oil, there can be no right on the part of the lessee to destroy or release gas not so used."

Requests for institution of these suits were received by the attorney general on Thursday, and assigned to Assistants Powers and Yarborough, who will recommend suitable action following a study of the arguments in the regent's request.

University Offers More Land for Oil Lease

Austin, Texas.—The University of Texas land leasing board has invited bids for leases on Crockett and Pecos County tracts for oil and gas development.

The board has not set the date to open bids and consider awards. The minimum rental is 25 cents per acre with one-eighth royalty.

Crockett County tracts offered were as follows: west half Section 13, all Section 24, west half Section 25, Section 14, west half Section 23, west half Section 35, all in Block 31; Sections 1, 2, 5 and 6 in Block 32; Sections 5 and 6, Block 29; west half Section 8, west half Section 7, Sections 1, 2, 3, 10, 11, 12, 22, 23, 26 and 27 in Block 29.

Pecos County tracts offered: Sections 5 and 6, Block 29; Section 34, Block 27.

Use to Which Naphtha Is Put Determines Import Tax

Washington, D. C.—Warnings to watch for imports of naphtha which is suitable for use as internal combustion engine fuel and to assess the new import tax of 2½ cents per gallon on such shipments have just been sent to collectors of customs by Acting Secretary of the Treasury Ballantine.

The Bureau of Customs has deter-

mined that the new revenue law imposes a duty of 2½ cents per gallon on all imports of naphtha which at the time of entry can be used to propel internal combustion engines. Naphtha, the bureau has ruled, is a term covering a wide range of liquid petroleum products, but the new import tax will attach only to naphtha capable of being used as motor fuel. If the product cannot be used in engines the tax will be one half-cent per gallon.

The bureau's warnings immediately followed issuance by the Bureau of Internal Revenue of a ruling which provides that kerosene, technical naphtha, crude naphtha and tractor distillates will not be subject to the new gasoline tax if they are not used for the propulsion of motor vehicles, boats, or airplanes.

Watch for Tax Evasion on Imports of Naphtha

Washington, D. C. — Government agencies in Washington are studying closely the importations of naphtha with a view to determining whether any effort is being made to evade the spirit, if not the letter, of the new revenue act by importing naphtha of a grade just low enough to relieve it from the tax of 2½ cents per gallon as motor fuel, and then by adding a small percentage of casinghead gasoline developing a product equal to ordinary gasoline.

There appears to be a suspicion on the part of some officials that the recent request for a ruling on the taxable status of naphtha was prompted by a desire to secure a ruling which would enable the importation of certain grades of the product at the one-half-cent per gallon rate.

The Treasury Department has ruled that naphtha suitable for use as engine fuel as imported is subject to the gasoline import tax, but that lower grades may be brought in at the half-cent rate.

Representations were made to the department, it is understood, that the non-fuel naphtha would require some 40 per cent of casinghead gasoline to be converted into a motor fuel equal to ordinary gasoline, but it is also understood refinery laboratories are working on a grade of naphtha sufficiently low to escape the gasoline tax but good enough to require the addition of only about 10 per cent of natural gasoline. There is no indication as to what the department's attitude would be to this.

Break-Down of Tax *Program May Bring Adoption of* Sales Tax

WASHINGTON, D. C.

EVENTUAL adoption of the general manufacturers' sales tax as a means of solving the government's revenue problem is predicted as a result of the large volume of complaints which are being received in Washington charging that rates in the 1932 law are "prohibitive."

The next session of congress, it is forecast by Senator Reed Smoot of Utah, Republican chairman of the finance committee, in the light of general business conditions as they then probably will exist will find it necessary to re-examine the law with a view to removing inequities. Senator Smoot favors the general sales tax and believes it ultimately will be adopted.

Substitution of a general manufacturers' sales tax for the present individual levies would, of course, include a change in the rate of tax upon manufacturers of petroleum products, since a general tax would provide a single rate for all manufacturers in lieu of the present varying rates.

The movement looking toward revision of tax rates came on the heels of President Hoover's speech of acceptance, in which he pointed out that where rates have proved excessive and are sapping the life of the industries they must be revised.

"There are inequalities in the new law passed at the last session of congress and these inequalities must, in my opinion, be corrected," Senator Smoot declared. "Results of the new rates will be apparent by fall and I believe they will show the necessity of some changes in the law.

"Business men in various sections of the country have written protesting some of the new rates, which they assert are excessive and threaten their ruin. Personally, I think that the bottom of the business depression has been reached and that conditions are getting better everywhere in the country. I believe these conditions will continue to improve and I hope it will be a gradual upward movement instead of a movement too speedy for safety.

"We have consumed most of our surplus in various articles and there is justification for the manufacturers to resume operations if they are to meet the demand for supplies. The end of the business of operating on a hand-to-mouth basis is, I hope, in sight. A great many men have been put back to work and I am satisfied that unemployment will steadily decrease."

Reverting to the taxation problem, however, the senator expressed the opinion that until business has substantially improved there can be little hope of a downward revision of federal taxes. He pointed out that the levies in the new law were based on better business than is now prevailing. Because of this fact, he said, the correcting of inequities in the law does not mean a general revision downward.

Court Orders Military Not To Tear Up Pipe Line

Oklahoma City.—A further flare in the fight to determine whether military control of the Oklahoma City pool can be interferred with by state courts loomed August 24 when District Judge Sam Hooker signed an order forbidding Lieut. Col. Cicero I. Murray, military proration dictator from "tearing up" a $25,000 pipe line. The order came on a petition of Otto Bradford, former umpire of the Oklahoma City pool and now president of Union Crude Oil Corporation, who said he had been served with a military order giving him 24 hours in which to disconnect his line. Murray explained he did not mean that the pipe line was to be dug up but that it was to be fixed so oil could not be transported through it. Neither Colonel Murray or the governor would comment further except for the governor's declaration that he had "said all he wanted to say about these court orders."

Col. Murray was ordered to appear in court and show cause why he should not be permanently enjoined from destroying the line. Bradford's petition alleged that Col. Murray "had caused to be delivered a written notice that he intended to tear up and destroy the line." It was further charged that the oil field commander has no legal authority to destroy property, that he is insolvent and could not be made to answer for damages.

It is understood that Bradford's line was connected to wells owned by Russell Petroleum Company whose petition for injunction against military control is now before the court. Called as a witness in this case, Bradford refused to testify, stating he understood that he was to be charged along with the rest in the alleged illegal production and transportation of oil.

Bradford was field umpire from the beginning of proration in the Oklahoma City pool until October, 1931, when he resigned.

MEN IN THE INDUSTRY'S NEWS

EARL OLIVER

Chairman of the Petroleum Division, American Institute of Mining and Metallurgical Engineers.

Who is pushing to completion plans for the fall meeting which will be held in Ponca City, September 30 and October 1.

This meeting bids fair to become one of the most important oil gatherings of the year with open forum discussions of methods of promoting public understanding of the physical and economic laws governing oil and gas deposits and the industrial practices and political laws that will be in harmony with them.

EARL OLIVER

JOHN McPEAK, secretary of Union Oil Company of California, has completed 25 years of continuous service with the organization.

WILLIAM J. KEMNITZER, director of research for the J. Edward Jones organization, sailed on August 19 for London, for the purpose of conducting investigations into certain phases of the international petroleum situation. Following the recent world conferences of representatives of the principal oil-producing nations, several important problems relating to world-wide petroleum economic conditions were brought to the fore and a study of these conditions is being made by the organization which Mr. Kemnitzer represents, both in this country and in Europe. Mr. Kemnitzer is co-author of "Petroleum in the United States and Possessions" and has conducted important research work in the economics of petroleum.

T. P. CARR, who recently returned from a tour of duty in South America with the Venezuelan Petroleum Company, subsidiary of Consolidated Oil Corporation, is now connected with the Sinclair Prairie Oil Company at Fort Worth, Texas, where the headquarters for the southern division of production are maintained, with Glen Harroun in charge.

HARVEY WILLSON has joined the organization of Radbill Oil Company, Philadelphia. Until July 1 he was in charge of the Oil City office of the Pennsylvania Grade Crude Oil Association.

HERSCHELL R. SCIVALLY, land man for Amerada Petroleum Corporation in North Louisiana, Mississippi and Alabama, will join the staff of Arkansas Fuel Oil Company with headquarters at Shreveport, effective September 1. W. H. Taylor will succeed Mr. Scivally.

FOREST J. MILLER, geologist for Arkansas Fuel Oil Company with headquarters in Shreveport, will make headquarters at Jackson, Mississippi, in the near future, still continuing with Arkansas Fuel Oil Company.

M. KITANO and M. Negoro, production engineers for Nippon Oil Company in Japan, will remain in California for some time to study American operating practices.

W. C. TROUT is on an extended business trip to the North and East in the interest of Lufkin Foundry & Machine Company, of which he is president. Mr. Trout expects to return to Lufkin about the middle of September.

WILLIAM GROUNDWATER, director of transportation for Union Oil Company, has been appointed a member of the American Bureau of Shipping.

FRED SHAFER, formerly with The Texas Company at Bakersfield and more recently with Oil Producers Sales Agency, has accepted a position with the land department of The Texas Company at Los Angeles.

V. B. LIKINS, president, Mid-Continent Metal Alloys Company of Oklahoma City, has purchased the interest of Ford L. Lawton in this company. The company is the manufacturer of Osage hard facing metal for bits. Wessendorff, Nelms & Company of Houston serve the company as jobbers in Texas, and R. B. McCaine has recently been appointed as Gulf Coast district representative.

ED McADAMS, independent operator, has been appointed receiver for Dollar Oil Company of California.

J. GRANT MOODY, 66, died August 18 at Big Spring, Texas, and the body was forwarded to Parkersburg, West Virginia, for burial. He had been with Magnolia Petroleum Company in Texas for 15 years, coming there from Pennsylvania. He is survived by his widow and four sons who reside in West Virginia.

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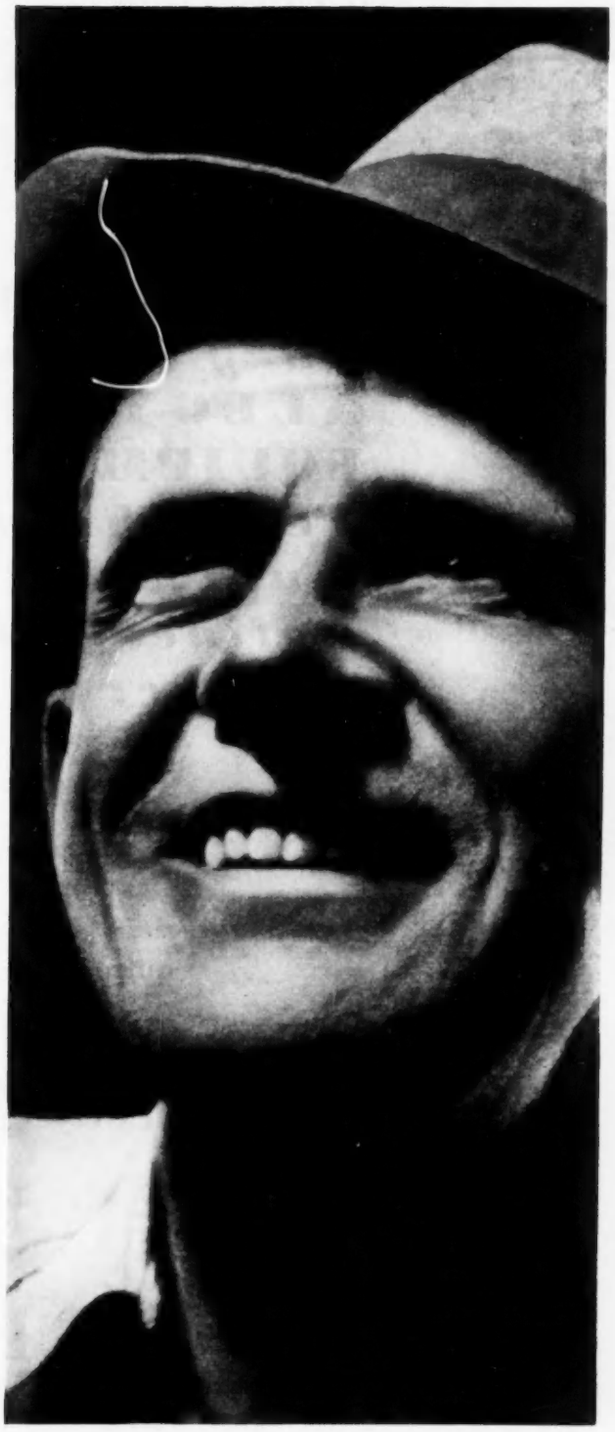

ROD costs reduced from $6.89 to $1.10 a day—or from $13.31 to $1.34 a day! Those figures—taken from actual service records—are typical of what Reading Puddled Iron Sucker Rods are doing today to keep costs DOWN.

You'll SAVE with Reading Rods—save maintenance, labor and time. You'll keep your cost per barrel at a minimum, without the dragging expense of frequent rod breaks. Operators throughout the oil country are learning that PERFORMANCE—not promises—is what makes Reading Rods a paying investment on any lease.

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MARKETS — STATISTICS

Crude Production Definitely Below Average. Expect Market to Be Helped by Texas Adjustment of Proration. Reduced Rail Rates Help East Texas Refiners to New Markets.

Burning Oil Inquiries Meet Higher Price Demand

BURNING oils continued to dominate the Mid-Continent market so far as anything of interest is concerned. Most of the action of the past few weeks has involved only quotations and inquiries with many refiners said to be holding for better prices. Any movement now of course would be in future delivery buying since the period of heavy consumption has not yet arrived. Since the low cold test oils come from cracking and refiners are launched on a campaign to decrease runs to stills, this material may see a steady price and demand throughout the coming fall and winter. Much optimism prevails in the fuel oil market but the outcome must depend upon the pick up in general industry since it is in the big manufacturing plants that most of the material is consumed.

Estimated net crude movement from Oklahoma and Kansas storage during the week ending August 15, was 36,000 barrels daily out, or twice the amount which was withdrawn from storage during the preceding week. This movement, which is the greatest that the two states have seen in several weeks, can be explained only by the desire of certain companies to further liquidate stocks.

Crude Output Again Goes To New Low for Year

FOR the second consecutive week crude oil production in the United States during the seven days ending August 27 remained within particularly low bounds, thus favoring the economic situation of the oil industry with a sustained desirable condition.

As pointed out last week the output of 2,111,580 barrels daily for the seven days ended August 20 was the lowest achieved during 1932 with the exception of the first week of July and one week late in February. An outstanding record was made during the week that has just passed, therefore, since the average daily output was even lower than that of the week of August 20 by 2945 barrels, the figure for the week ended August 27 being 2,108,635 barrels daily. This encouraging downward trend of production is shown graphically in the chart on the following page.

In contrast with its record of the past 10 or 12 weeks, in which there have regularly been violent upward or downward fluctuations of its production, due largely to unsettled conditions in the Oklahoma City field, Oklahoma during the past week registered only a slight change, the average daily output of 387,310 barrels being about 4000 barrels under the average of the previous week. Oklahoma City's production was a little over 4000 barrels higher for the week, but that gain was cancelled by a 5000-barrel decline in the Seminole district and a 2500-barrel drop in other Oklaohma fields.

California lent its influence to the generally favorable production situation by registering a decline of 5000 barrels from the previous week's daily output, the new daily average being down to 470,000 barrels. The California operators in holding production down were contributing, incidentally, to the stability of the crude oil price structure in that state, the current price schedule being maintained by major purchasers on condition that output be held within the official allowable.

THE OIL WEEKLY

Estimated Average Daily Production in Barrels

District	For Week Ending Aug. 27	Aug. 20
TEXAS—		
Texas Panhandle	54,100	55,450
North and West Central Texas	74,650	74,625
West Texas	171,550	171,500
East Central Texas	56,250	56,200
East Texas Field	327,975	321,200
South Texas	56,750	56,200
Total Texas outside Gulf Coast	741,275	735,175
Texas Gulf Coast	122,450	125,200
Total Texas	863,725	860,375
OKLAHOMA—		
Oklahoma City	70,590	66,220
Seminole District	132,745	138,400
Other Oklahoma	183,975	186,545
Total Oklahoma	387,310	391,165
KANSAS—		
Ritz-Decker	13,645	11,580
Voshell	6,785	6,620
Other Kansas	74,720	75,350
Total Kansas	95,150	93,550
LOUISIANA—		
North Louisiana	27,850	29,000
Louisiana Gulf Coast	31,600	31,500
Total Louisiana	59,450	60,500
Arkansas	33,000	34,000
CALIFORNIA—		
Long Beach	69,000	71,000
Santa Fe Springs	59,000	58,000
Midway-Sunset	48,000	50,000
Kettleman Hills	60,000	61,000
Other California	234,000	235,000
Total California	470,000	475,000
MOUNTAIN STATES—		
Wyoming	34,500	31,450
Montana	7,950	2,650
Colorado	2,800	7,500
New Mexico	31,700	31,750
Total Rocky Mountain States	76,950	73,350
Eastern States*	123,050	123,650
Total United States	2,108,635	2,111,580

*Includes Michigan.

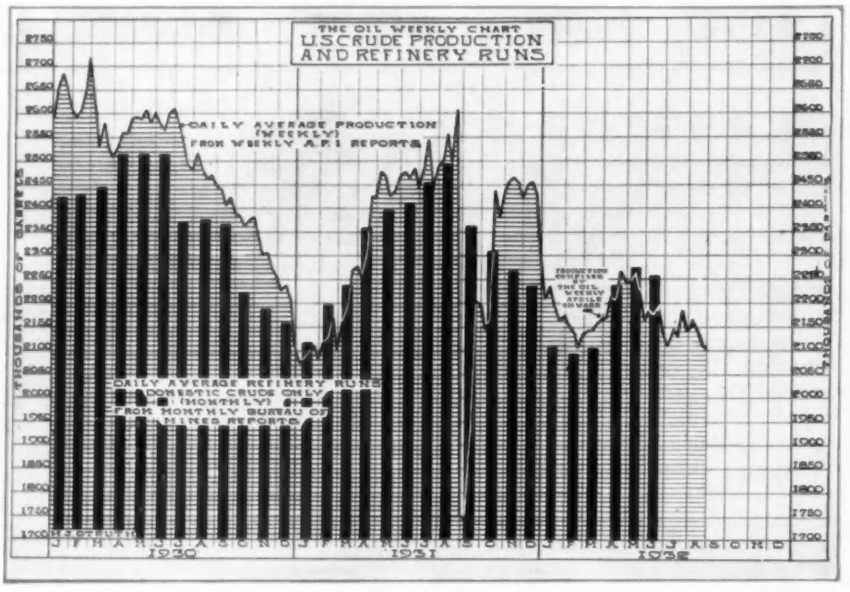
While Texas showed an increase of somewhat over 3000 barrels in its average daily output by producing 863,725 barrels daily during the week ending August 27, that rise was largely a technical one due to a 6000-barrel gain in the East Texas field occurring through normal functioning of the proration plan used in that field, with newly completed wells gradually raising output after the beginning and middle of each month, when downward revisions of the field's total allowable are regularly made through reductions of the daily allowance per well. The wells are allowed 43 barrels production daily each the latter half of August. The East Texas gain in daily output the past week was about 50 per cent offset by a 3000-barrel decline for Gulf Coast fields, with all other sections of the state virtually unchanged.

Proposed Texas Proration Adjustment to Help Market

A SUBSTANTIAL slash in the production of some of the most prolific areas in Texas, exclusive of the East Texas oil field, is slated to occur as a sequel to a hearing by the Texas Railroad Commission at Austin August 29 in response to a plea of a well organized group of independents in the latter field that added penalties be given such fields as Van, Yates, Barbers Hill, Rabb Ridge, Conroe and others. Any action taken will be beneficial to the crude price structure.

Reduced allowables will be enforced in some of these fields, as voluntary reductions have already been tentatively agreed upon in some instances by operators, or rather promises have been made not to protest any reasonable action on the part of the commission.

The complaining group from East Texas are hopeful of making a sufficient gap in the available crude supplies of the major interests to cause them to divert their support in a greater quantity to the East Texas field. Such action is being relied upon as the only means of forestalling a continuation of bi-monthly reduction of well allowables in the largest of



all fields. Those seeking to make other flush fields of the state surrender a portion of their markets are also largely responsible for the blocking of a move to substitute the well allowable plan of proration in Tast Texas field for a combination acreage and well allowable as a means of killing the incentive to continue unnecessary drilling. They also recognize the danger of a collapse of the price structure by supplying a large daily quota of new wells to be served with a market outlet, and expect to prevent same by having normal market outlets for other fields diverted.

California Sees Need for Still Further Curtailment

THE commotion caused by the slight overage of a few fields in California would not be so great under more normal conditions, but an analysis of the reasons for the insistence of principal purchasers shows that the need for a still lower output this winter is already apparent. Standard Oil Company and other purchasers are watching the daily output closely, and has informed the industry in general that production will have to be held down.

Some of the more conservative operators favor a much lower allowable than the one now in force, claiming that the time is coming when stocks will increase under the present plan. Others insist that conditions will improve quickly enough to permit rapid withdrawals from stocks under the current schedule. Either faction may win its point, but right now there is some doubt as to withdrawals during the winter months.

Stocks increased 1,060,000 barrels during July, giving the state a total of 170,492,000 barrels. Heavy crude stocks jumped 1,177,000 barrels during the month, but light stocks dropped 539,000 barrels.

Crude production may be reduced to meet this condition, but it will be no easy matter to force the state total sharply downward. A few fiields are slightly over their allowable, but the underproduction is fully as great.

California has been striving to increase exports. Some of the best markets have been lost to other districts. World conditions will affect exports in the future as they have in the past.

The tariff seems to have caused unexpected competition from other oil producing countries. Much South American oil is reported to be replacing California oil in world markets since the advent of the protective tariff.

The retail price of third grade gasoline has been reduced in the Los Angeles district to meet competition, but the premium and better grades remain unchanged.

Reduced Rail Rates Help East Texas Refiners

Tyler, Texas.—Refiners in the East Texas oil field have been successful in booking orders and making delivery on gasoline to Atlantic and Pacific Coast points as result of railroads having reduced their rate on tank car shipments to Houston, Texas City, Baytown, Port Arthur, Beaumont and Galveston from 15 to 11 cents per 100 pounds. An emergency, or extra charge of one cent per 100 pounds applies. The Interstate Commerce Commission authorized this lower rate effective August 11, and it automatically places this group of interior plants in closer competition with Coastal plants for Coastwise markets. The reduced rate does not apply on export shipments.

A bid for tank car movement of East Texas crude to the above Texas ports for coastwise points has also been made by the railroads in granting a rate of 8.8 cents per 100 pounds, or 27.35 cents per barrel. The old rate was 11 cents, plus 1.1 cent emergency tariff, or 37.61 cents per barrel. The common carrier pipe lines have a tariff of 20 cents on East Texas crude moving to one or more of the above coastal points, and if field gathering service is performed an extra charge ranging from five to 10 cents per barrel applies.

Ritz-Garrett-Decker Area Get Increased Market

Wichita, Kansas.—As a result of increases in nominations, operators in the Ritz-Garrett-Decker area were notified, effective at 7:00 a.m., August 23, to increase daily runs on all Viola lime wells from 7 to 8.8 per cent of the daily potential and on all chat wells from 6 to 7.8 per cent. The order exempts all Viola lime wells which are receiving maximum allowance and all chat wells which are receiving full production or maximum allowance.

Practically all wells in the chat horizon make water initially or shortly after completion and are placed on the pump after a comparatively short flowing life. According to the report of the umpire as of August 1, 53 of a total of 62 chat wells were receiving full production because of water or minimum allowance of 100 barrels daily in lieu of taking potential.

Second Pipe Line Outlet For Conroe Now in Use

Houston.—Operation of The Texas Pipe Line Company's 14½-mile, six-inch line out of the Conroe field, Montgomery county, was recently started, and the area therefore now has two outlets for production, the other being that of Humble Pipe Line Company, a 27-mile eight-inch screwed line laid in June and connecting at Satsuma station, Harris County, with

Crude Runs to Stills, Motor Fuel Stocks, Gas and Fuel Oil Stocks and Cracked Gasoline Production, as compiled by A. P. 1. for Week Ended August 20, 1932

(Figures in barrels of 42 gallons)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		MOTOR FUEL STOCKS					Gas and Fuel Oil Stocks	Daily Charging Capacity of Cracking Units			Cracked Production Daily Average
	Potential Rate	Reporting Total	Reporting %	Daily Average	% Operated	(a) At Refineries	(b) Bulk Terminals	(b) In Transit	(c) Other M.F. Stocks	Total Motor Fuel		Potential Rate	Reporting Total	Reporting %	
East Coast	633,700	633,700	100.0	472,900	74.6	6,232,000	10,091,000	1,289,000	340,000	17,952,000	8,507,000	261,300	236,300	94.1	91,700
Appalachian	149,600	137,400	91.8	86,600	63.0	1,417,000	471,000	10,000	270,000	2,168,000	1,014,000	56,300	54,100	96.1	27,000
Ind., Ill., Ky	436,300	431,500	98.9	284,400	65.9	4,972,000	2,571,000	.....	175,000	7,718,000	4,349,000	330,400	315,400	95.5	80,700
Okla., Kans., Mo	485,700	435,200	89.6	223,100	51.3	3,242,000	790,000	.....	935,000	4,967,000	3,366,000	237,800	219,500	92.3	50,600
Inland Texas	305,700	233,900	76.5	101,900	43.6	1,172,000	24,000	.....	303,000	1,499,000	2,316,000	98,400	88,800	90.2	19,400
Texas Gulf	532,500	531,500	99.8	346,300	65.2	4,083,000	162,000	.....	280,000	4,525,000	9,018,000	352,400	347,400	98.6	78,700
Louisiana Gulf	147,500	147,500	100.0	98,100	66.5	1,405,000	233,000	.....	35,000	1,673,000	4,626,000	77,000	77,000	100.0	24,100
North La.,—Ark.	85,600	83,000	97.0	41,600	50.1	96,000	57,000	.....	66,000	219,000	640,000	35,400	35,400	100.0	8,700
Rocky Mountain	160,900	143,800	89.4	49,100	34.1	1,787,000	.....	.....	21,000	1,808,000	576,000	99,900	98,400	98.5	14,600
California	914,500	884,100	96.7	424,300	48.0	12,645,000	.....	.....	2,800,000	15,445,000	99,688,000	190,800	190,800	100.0	53,000
TOTALS WEEK: August 20, 1932	3,852,000	3,661,600	95.1	2,128,300	58.1	37,051,000	14,399,000	1,299,000	5,225,000	57,974,000	134,100,000	1,739,700	1,663,100	95.6	448,500
August 13, 1932	3,852,000	3,661,600	95.1	2,163,300	59.1	37,273,000	14,351,000	2,094,000	5,375,000	59,093,000	133,735,000	1,739,700	1,663,100	95.6	450,700

Below is set out an estimate of tota lmotor fuel stocks on U .S. Bureau of Mines basis for week of August 20, 1932 compared with certain August 1931 Bureau figures.

A. P. I. Estimate B. of M. basis Week August 20, 1932 (d)	37,790,000	16,470,000	5,225,000	59,485,000
U. S. B. of M. Motor Fuel Stocks August 1, 1931	37,151,000	14,494,000	4,620,000	56,265,000
U. S. B. of M Motor Fuel Stocks August 31, 1931	33,928,000	12,757,000	4,125,000	50,810,000

(a) Stocks at refineries, except in California district, which includes stocks of finished gasoline and engine distillate at refineries, at water terminals and at sales distributing stations and any amounts in transit thereto.
(b) By districts, East of California only. In California, bulk terminal and in transit stocks are included under "At Refineries" heading. See note (a).
(c) Estimated. Includes motor fuel in pipe lines and unblended natural gasoline at refineries and plants, also blended M. F. at plants.
(d) Estimated to permit comparison with A. P. I. Economics Report which is on Bureau of Mines basis.

Summary Review of Field Results

State—	Completions	Oil Wells	Gas Wells	Failures	Initial Prod.
Arkansas	1	..	..	1	.....
California	8	7	..	1	5,050
Illinois	3	1	1	1	1
Kansas	16	10	1	5	6,083
Kentucky	3	1	2	..	75
Louisiana	9	3	..	6	590
Michigan	11	6	2	3	4,835
Mississippi	1	..	1	..	.....
New York	7	6	..	1	24
Ohio	9	6	2	1	23
Oklahoma	26	18	1	7	79,342
Pennsylvania	43	25	1	17	77
Texas	252	195	6	51	1,223,615
W. Virginia	4	1	3	..	4
Miscellaneous	1	..	..	1	.....
Total	394	279	20	95	1,319,719

Comparison of Permits Granted For New Wells

State	For week ending Aug. 27	Total this month	Total this year	Total this date last year	1931 year total
Arkansas	0	0	13	25	34
California	3	18	196	249	342
Louisiana	5	46	331	211	309
Kansas	12	61	432	311	475
Oklahoma	15	110	755	567	842
Texas	206	781	6100	3844	6961
Total	241	1016	7827	5207	8963

Shell Will Drill Another Test on Danbury Dome

Houston.—Danbury salt dome in Brazoria County, found by Shell Petroleum Corporation with geophysical instruments and controlled largely by that company, will again be the scene of drilling shortly, that company having made location for Blakely-Winston 5 at a point 1410 feet northeast and 1200 feet northwest of the south corner of Section 14, H.T.&B. Railroad Survey.

In its first test on that dome Shell Petroleum Corporation recovered considerable 22 gravity oil from sand found around 1575 feet, but subsequently drilled deeper and encountered numerous additional favorable showings of oil and gas, finally going into salt at 5200 feet. The four additional wells which the company later drilled on the prospect were all relatively shallow tests, none going as deep as 2500 feet, and all being abandoned as non-productive although encountering showings of oil. The dome has consequently had no commercial production.

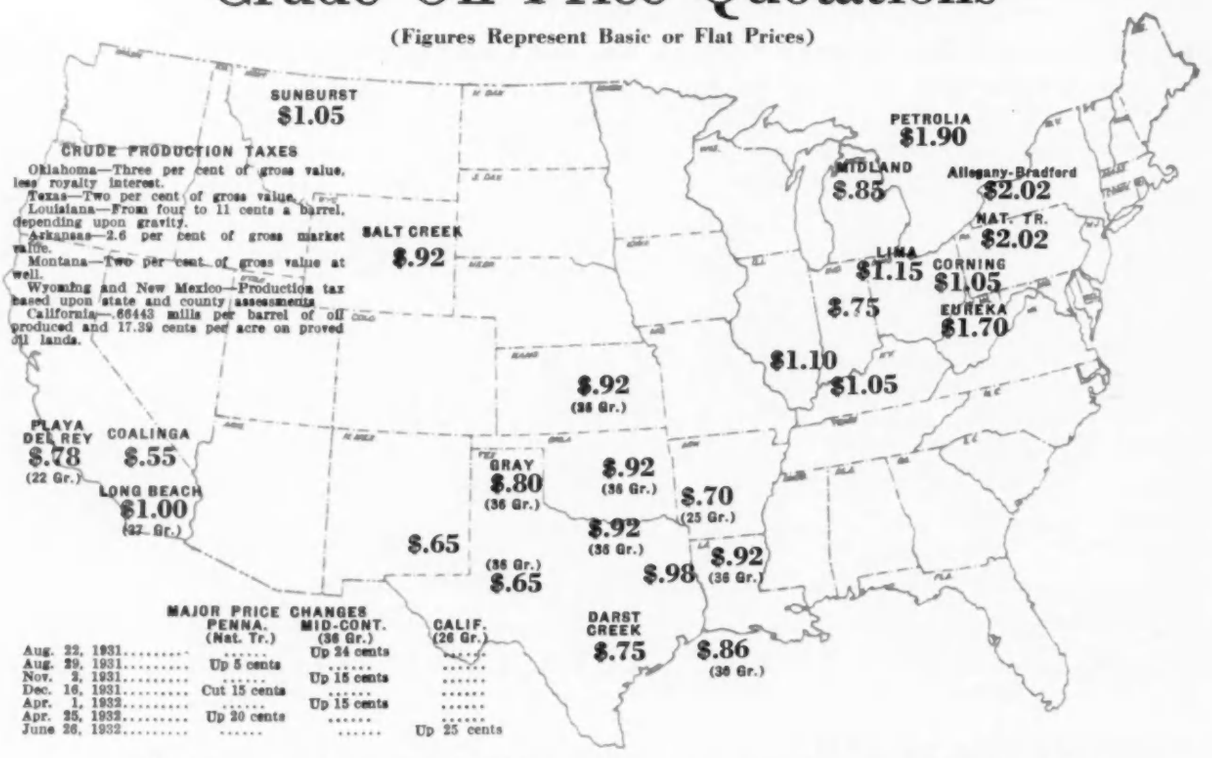
The Texas Pipe Line Company in its new carrier has been moving oil produced by Alpha Petroleum Corporation. This pipe line unit connects at a point near Spring with the company's trunk line system of two eight-inch lines leading out of the Mexia district to the Gulf Coast.

Two Mirando Fields Report Three Completions

San Antonio, Texas.—Two fields in the lower Mirando District added three producers during the past week. South Texas Oil Company's Rosenberg 7, Block 10, Survey 271, near the Carolina-Texas field, is making 75 barrels of 50 gravity oil from 2263 feet. Allied Oil & Gas Company and Allen & Morris' Gutierrez 36, Share 4, Fansler Partition, Escobas field, is good for 50 barrels from 1477 feet, while S. R. & C. Oil Corporation's M. Trevino 6-E, Block 12, Survey 65, also Escobas field, is making 40 barrels from 1255 feet. The former well is in Webb County, while the latter two are in Zapata County.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



Official Postings and Differentials *(Revised to August 26, 1932)*

CALIFORNIA: (Effective June 26, 1932).

Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach, Olinda-Brea Canon, Torrance, and Richfield: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 69 cents; 21 gravity 74 cents; 22 gravity 79 cents; 23 gravity 84 cents; 24 gravity 89 cents; 25-25.9 gravity 93 cents, top posting for Torrance and Richfield; 26-26.9 gravity 97 cents, top price for Seal Beach, Alamitos Heights and Huntington Beach; 27-27.9 gravity $1.00; 28-28.9 gravity $1.03, the top price for Olinda-Brea Canon; 29-29.9 gravity $1.06; and 30-30.9 gravity $1.09, the Signal Hill top posting.

Inglewood: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 71 cents; 21 gravity 77 cents; 22 gravity 82 cents; 23 gravity 87 cents; 24-24.9 gravity 92 cents, the top price.

Playa Del Rey: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 69 cents; 21 gravity 74 cents; 22 gravity 78 cents; 23 gravity 82 cents; 24 gravity 86 cents; 25 gravity 91 cents; 26-26.9 gravity 96 cents, the top price. Field gathering charges of 5 cents a barrel.

Athens, Rosecrans and Dominguez: 24-24.9 gravity 89 cents 25-25.9 gravity 93 cents; 26 gravity 97 cents; and 27-27.9 gravity $1.00 with three cents additional for each degree gravity upward, ending at 32-32.9 gravity $1.15.

Elwood Terrace: 33-33.9 gravity $1.04 and 6 cents more for each additional degree of gravity, ending with 37-37.9 gravity $1.28, all prices f.o.b. ship.

Whittier and LaHabra: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 68 cents; 21 gravity 72 cents; 22 gravity 77 cents; 23 gravity 83 cents; and 24-24.9 gravity 89 cents, the top price.

Montebello: 14 to 20.9 gravity 65 cents; 21-21.9 gravity 67 cents; 22 gravity 70 cents; 23 gravity 73 cents; 24 gravity 76 cents; 25-25.9 gravity 80 cents, the top price.

Coyote Hills: 14 to 20.9 gravity 65 cents; 21-21.9 gravity 66 cents; 22 gravity 70 cents; 23 gravity 76 cents; 24 gravity 81 cents; 25 gravity 86 cents; 26 gravity 90 cents; 27 gravity 94 cents; 28 gravity 98 cents; 29 gravity $1.02; and 30-30.9 gravity, $1.05, the top price.

Santa Fe Springs: 24-24.9 gravity 73 cents; 25 gravity 79 cents; 26 gravity 84 cents; 27 gravity 89 cents; and 28-28.9 gravity 94 cents, with 4-cent differential for each degree of gravity upward to 35-35.9 gravity $1.22.

Newhall, McKittrick and Kern River: 14 to 19.9 gravity 55 cents.

Midway-Sunset, Elk Hills and Buena Vista: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 59 cents; 21 gravity 63 cents; 22 gravity 69 cents; 23 gravity 75 cents; 24 gravity 81 cents; 25-25.9 gravity 87 cents and 5-cent differential for each additional degree gravity ending with 30-30.9 gravity $1.12.

Lost Hills: Same as Midway-Sunset up through 25-25.9 gravity 87 cents, then 26-26.9 gravity 91 cents; 27 gravity 94 cents; 28 gravity 99 cents; 29 gravity $1.02; and ending 30-30.9 gravity $1.05.

Coalinga: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 59 cents; 21 gravity 62 cents; 22 gravity 65 cents; 23 gravity 68 cents; 24 gravity 72 cents; and ending 25-25.9 gravity 75 cents.

Wheeler Ridge: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 57 cents; and 21-21.9 gravity 60 cents, with 3 cents more for each additional degree of gravity, ending 25-25.9 gravity 72 cents.

Oklahoma, Kansas, North Texas (Effective April 1, 1932).

Below 29 gravity: 76 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at $1.00.

North Texas: (Effective April 1, 1932).

Below 29 gravity, 76 cents, with two-cent differential upward, ending 40 gravity and above, $1.

Texas Panhandle: (Effective April 1, 1932)

Gray County: Below 35 gravity: 76 cents, with differential of 2 cents for each degree to 40 gravity and above, 88 cents.

Carson and Hutchinson Counties: Below 35 gravity: 66 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at 78 cents.

West Texas: (Effective April 1, 1932).

Crane-Upton, Crockett, Ector, Howard-Glasscock, Pecos and Winkler Counties, Texas, and Lea County, New Mexico 65 cents.

Southwest Texas: (Effective April 11, 1932)

Refugio: Heavy 80 cents.

Refugio: Light: (Same as Gulf Coast—see below).

Gulf Coast: (Effective April 1, 1932).

Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity: 80 cents, with differential of 1 cent for each degree to 40 and above which is posted at $1.00.

Mirando: 80 cents; **Salt Flat:** 75 cents; **Darst Creek:** 75 cents; **Pettus:** $1.00; **Markham:** Same as Gulf Coast.

Conroe, Texas: (Effective July 18, 1932).

Two-cent differential applies, beginning 35-35.9 gravity, 90 cents, ending 40 gravity and above, $1.

East Texas: (Effective April 1, 1932)

Flat Price: 98 cents.

North Louisiana and Arkansas: (Effective April 1, 1932).

Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 25 gravity 68 cents with differential of 2 cents for each degree beginning with 25 gravity and ending with 40 and above. Top price $1.00 a barrel.

Smackover: 65 cents.

Rocky Mountain States: (Effective June 1, 1932).

Salt Creek: Below 29 gravity 76 cents; 29-29.9 gravity 78 cents with differential of 2 cents each degree to 40 and above. Top price $1.00.

Elk Basin and Grass Creek: $1.10; **Big Muddy:** 98 cents; **Lance Creek,** $1.15; **Rock Creek:** 90 cents; **Sunburst:** $1.05; **Osage:** 98 cents; **Cat Creek:** $1.20; **Pondera:** 90 cents; **Hogback, New Mexico:** 80 cents.

Mid-Western States: (Effective April 11, 1932).

Lima: $1.15; **Indiana:** 75 cents; **Illinois:** $1.10; **Princeton:** $1.10; **Wooster:** $1.25; **Western Kentucky,** $1.05.

Pennsylvania: (Effective August 11, 1932).

Bradford District: $2.02; **National Transit Oil:** $2.02; **Southwest Pennsylvania Pipe Line Oil:** $1.72; **Eureka Pipe Line Oil:** $1.67; **Buckeye Pipe Line Oil:** $1.52; **Corning Crude:** $1.05.

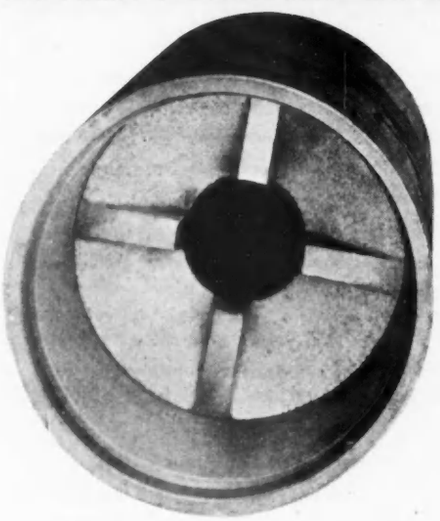
Michigan: (Effective July 13, 1932), **Midland:** 85 cents a barrel. **Muskegon:** 76 cents to $1.00 a barrel.

Canada: (Effective Nov. 3, 1931).

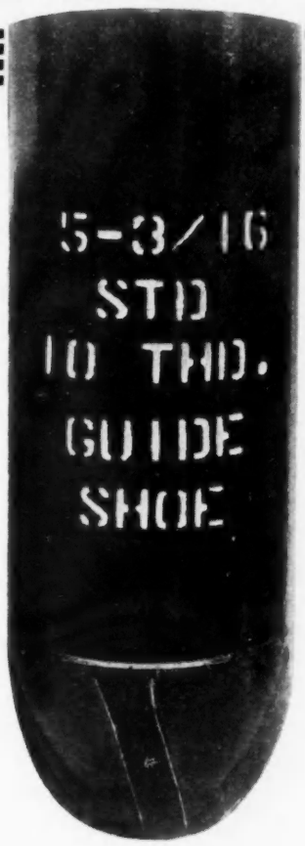
Petrolia: $1.90; **Oil Springs:** $1.97.

HALLIBURTON *floating* EQUIPMENT

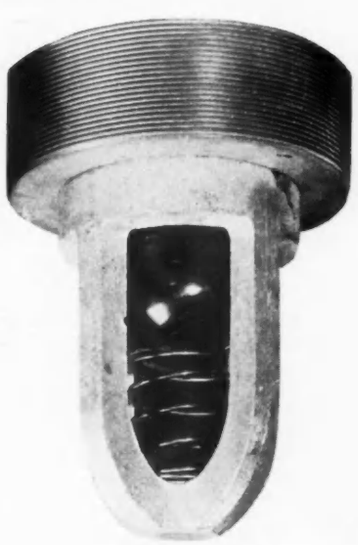
DESIGNED WITH THE VIEW OF ELIMINATING DIFFICULTIES WE HAVE EXPERIENCED IN MANY CEMENTING JOBS DURING THE PAST FEW YEARS ●



Openings and Courses thru the Guides and Back Pressure Valves permit free flow of cement.



We assume all patent liability on any and all equipment manufactured and sold by us.



Halliburton
Back Pressure Valve

HALLIBURTON OIL WELL *Cementing* COMPANY
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Halliburton
Guide

Straight Holes Reduce

JACK
Staff

SIX pumping wells in a southern Texas oil field on which complete equipment replacement records were available were given "straight hole" surveys recently in an effort to determine whether or not high replacement costs represent penalties for crookedness of wells.

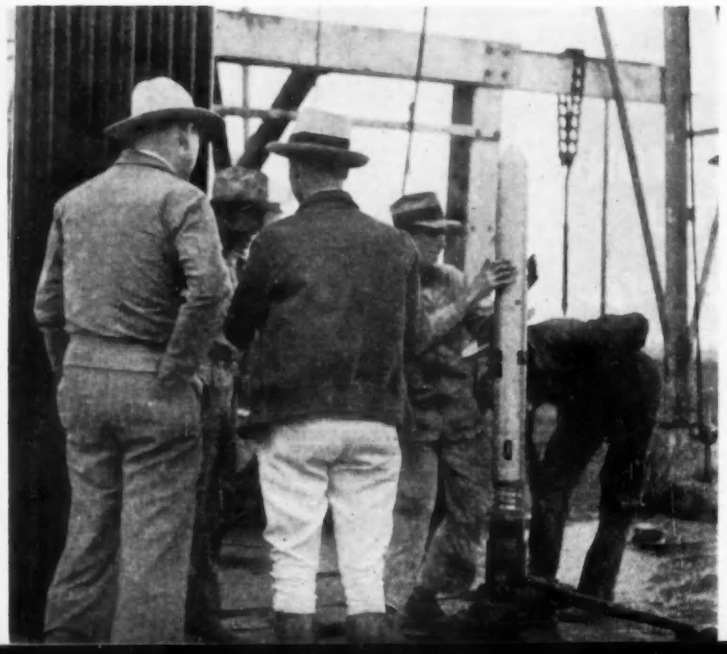
The investigation furnished rather conclusive evidence that high replacements of rods and pumps *are* due largely to crooked holes, and that relatively low replacements, conversely, may be credited in large measure to straight holes.

The actual dollars-and-cents savings in the straight well, by virtue of lower rod and pump replacements, are indicated to be of such magnitude, furthermore, even if the well is comparatively shallow, as to offset alone such surveying cost as may have been involved in attaining the straight hole; with the many other conceded benefits of straight holes, such as less time off the pump, more efficient drilling, pipe handling, and cementing, and more accurate geological interpretation, accruing as surplus value received.

The one of the six investigated wells which proved most crooked, for instance, had required rod and pump replacements costing over $550 during a pumping period of 635 days, an average replacement cost of almost $1 a day. Another of the wells, which was shown by the "straight hole" investigation to be relatively free of crooks or sharp bends, had not needed any rod or pump replacements at all after having been on the pump an almost equally long period, 622 days. The other four wells, varying in crookedness between those two extremes, had differed proportionately in replacement requirements.

This six-well investigation was carried out recently at the instance of THE OIL WEEKLY, which made arrangements for its execution and proposed to publish the results found. The six pumping wells and records thereon were supplied for the experiment by one of the leading producing companies of Texas, which also furnished other valuable cooperation. The "straight hole" surveys, and constructive suggestions in connection with them, were contributed by Sperry-Sun Well Surveying Company of Philadelphia, the surveys having employed the "Surwel Gyroscopic Clinograph," an instrument which revealed direction as well as angle of vertical inclination of each well throughout its entire length.

The upper portion of the Sperry-Sun gyroscopic well-surveying apparatus just before being lowered into the well on a wire line. Final adjustments are being made, preparatory to lowering protective casing over it, the latter being fastened to the end of the wire line.



WHILE the general theory that a crooked hole seriously affects the well's pumping costs has had common acceptance for some time, definite information on just what the relation actually is between crooked holes and lifting costs has been lacking.

THE OIL WEEKLY some time ago inaugurated certain experiments, assisted in thereby by a prominent well surveying company and two major operating companies, one in California and one in Texas. As a result of these experiments, which surveyed and analyzed costs on a comparative basis in six wells ranging from 2800 to 3400 feet deep in Texas and six wells of more than 6000 feet each in California, the matter of the relation between crookedness of hole and pumping costs has been taken out of the realm of speculation and cataloged as something on which definite information has been obtained.

THE OIL WEEKLY wishes to express its appreciation to Sperry-Sun Well Surveying Company, which contributed the surveys on the wells without charge to aid the experiment, and a large operating company which furnished the wells and complete well records without which the experiment would have meant nothing. The engineering and producing departments of this company rendered a splendid and appreciated co-operation.

The six wells selected represented three classifications from the standpoint of rod and pump replacement costs, with two wells in each group. The first group showed relatively low costs, the second group medium costs, and the third group relatively high costs. Those classifications were relative, however, rather than absolute, since none of the replacement requirements were excessively great.

Full details concerning those replacements are presented in an accompanying table, with number of days which the well was pumped shown, along with total costs of replacements, and average replacement cost per day of pumping for each well. The six wells are identified in the table by the letters "A" to "F".

When the "straight hole" surveys had been completed in the field and courses of the wells had been plotted, it was found that the six wells fell within three separate classifications from the standpoint of crookedness, just as they had done with respect to replacements: two of the wells being very straight, relatively; two moderately straight; and two relatively crooked. Like the high replacement costs, the

Equipment Replacements

LOGAN
Representative

SIX pumping wells showing low, medium, and high requirements for rod and pump replacements, were surveyed and found to be particularly straight, moderately straight, and materially crooked, respectively, indicating that replacement costs are perceptibly increased by crookedness of the hole. Taking costs of the replacements into consideration, it was indicated that surveys resulting in straight holes will in many instances pay for themselves solely through savings on rod and pump replacements, with the many other benefits of straight drilling as net gain.

From the more technical standpoint of well surveying practice and interpretation, also, as well as from the above business or financial viewpoint, the six-well investigation pointed out a very important fact: that the type of crookedness most instrumental in causing rod and pump wear consisted of sharp bends, or "dog legs," attending rapid changes in amount or direction of slope of the hole. Crookedness of such nature, it was further suggested, may not always be detected in a drilling well through "straight hole" surveys made only at large intervals or under policies of holding angle of inclination within specified lax limits.

For the trouble-causing sharp bends to be revealed, and therefore for the well to have maximum straightness and highest operating efficiencies and economies, it was concluded, there is need for almost continuous "straight hole" surveying; with readings at short intervals, covering angle of inclination of the hole in order to show sharp bends attending rapid changes in amount of slope, and preferably covering also directional inclination to show bends accompanying sudden changes in direction of slope.

crookedness was rather relative than absolute, it should be pointed out, since all of the six wells, like most others in the same field, were probably above the average in straightness for wells of the involved depths (2800 to 3400 feet), due to favorable nature of formations drilled and care exercised in the drilling.

Details in connection with the straightness or crookedness of the six wells are presented in the accompanying projections or maps revealing graphically the exact courses of the wells, and in the table showing vertical inclinations and horizontal displacements at different horizons.

As a part of the previously mentioned table on rod and pump replacement costs, there has been included information interpreting briefly the evidence offered by the "straight hole" surveys. That correlation of facts shows strikingly how wells with high rod and pump replacement costs proved to be crooked, while wells of lower replacement costs were found to be less crooked.

Crookedness Here Implies Sharp Bends

This six-well investigation not only brought out that basic fact that wells with high replacement costs are probably so because of being crooked, but it also furnished some very important evidence in connection with the nature of the crookedness affecting the replacement requirements.

Thus the crookedness which was found to be of paramount importance was that in the form of sharp bends or crooks. Wells with such bends, as evidenced in the "straight hole" surveys by rapid changes in amount or direction of slope, exhibited high wear on rods; while wells free of such bends had slighter rod wear. Furthermore, those latter wells were not necessarily "straight" in the sense of being truly vertical, some of them deviating considerably from the truly vertical, so that absence of twists, rather than attainment of true verticality, was indicated to be the primary factor contributing toward the low rod wear.

Lessons Pointed Out by the Investigation

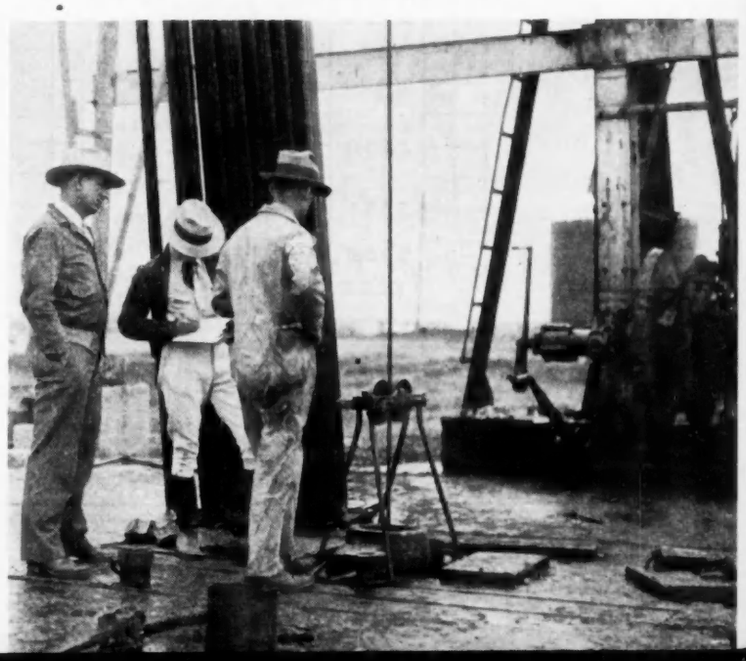
The investigation therefore not only pointed out the basic precept that "straight hole" surveys more than pay for themselves in savings on pumping equipment replacements, but it also pointed out an especially important fact in connection with the technical aspect of well surveying: namely, that *one of the primary goals should be elimination of sharp bends,* a goal which can be attained ordinarily only through more or less continuous "straight hole" surveying throughout the length of the well.

In accomplishing elimination of the sharp bends it is not enough, in other words, to make surveys only at large or infrequent intervals. It is not enough, either, to hold the angle of vertical inclination within some such limit as five degrees or three degrees from vertical.

Although the latter practice has in many instances constituted the extent of a producing company's concern with crooked holes, it obviously does not lead necessarily to complete elimination of the described sharp bends, which are major sources of trouble. For the hole may stay well within such a limit, and yet be characterized by such rapid changes in amount or direction of slope as to have many sharp bends.

As an example of what can occur, suppose that the driller, finding that the hole is deviating almost five degrees from vertical, slows down progress of the drilling bit and straight-

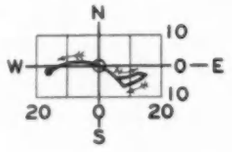
The wire line meter over the well head registers footage as the instrument goes into the hole. The engineer at the right is taking time readings every 50 feet with a watch synchronized with the watch of the gyroscope, thus fixing the depth at which each photograph is taken.



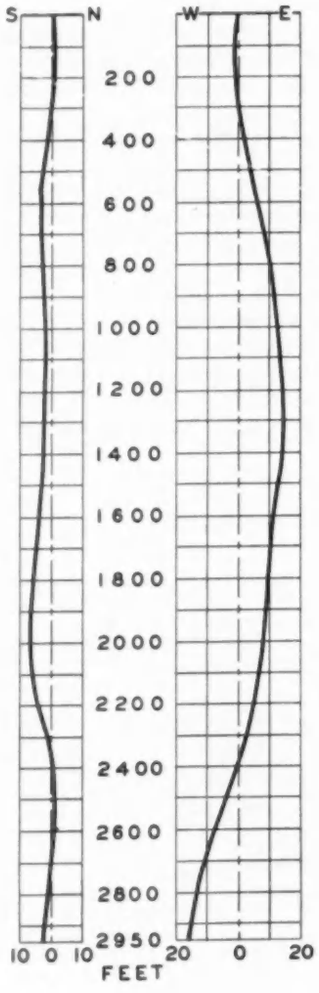
HORIZONTAL AND VERTICAL WELL PROJECTIONS

WELL A

HORIZONTAL PROJECTION

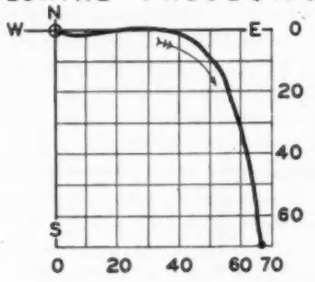


VERTICAL PROJECTIONS

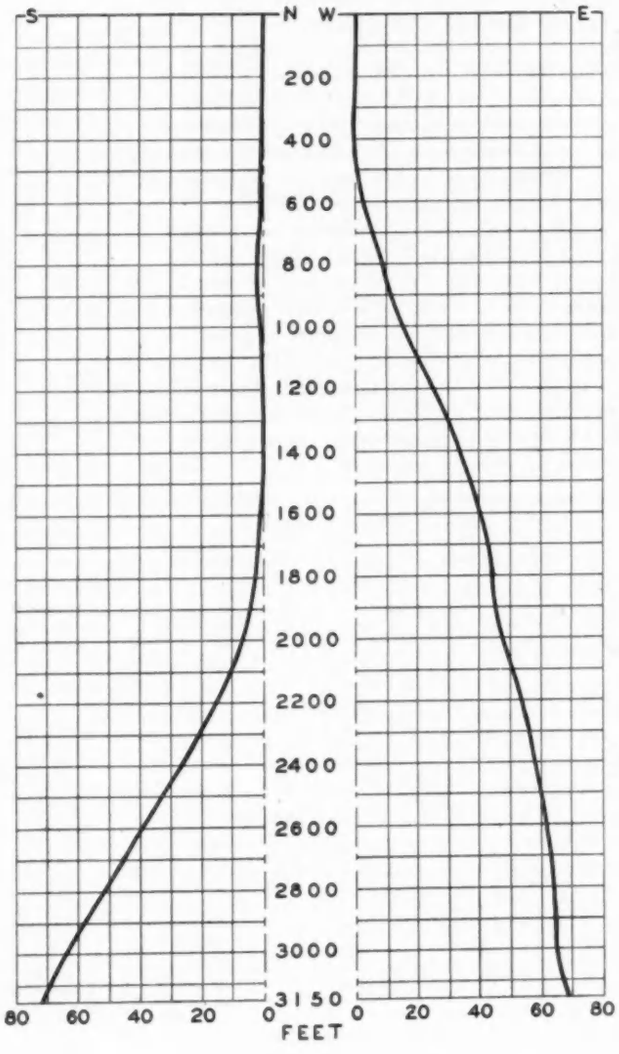


WELL B

HORIZONTAL PROJECTION



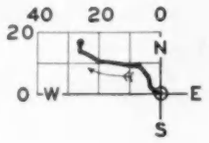
VERTICAL PROJECTIONS



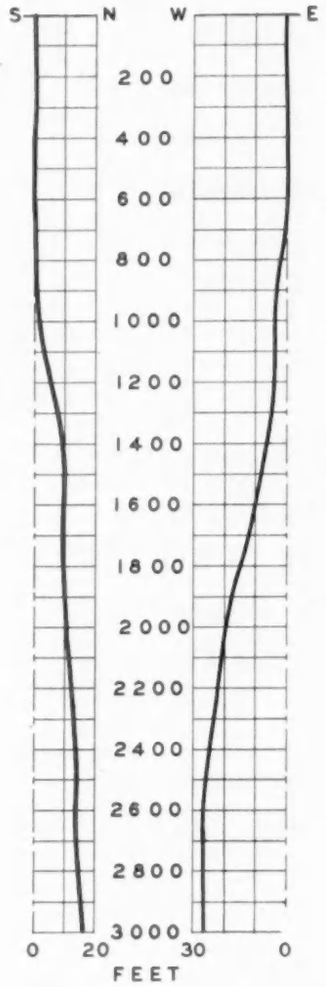
HORIZONTAL AND VERTICAL WELL PROJECTIONS

WELL C

HORIZONTAL PROJECTION

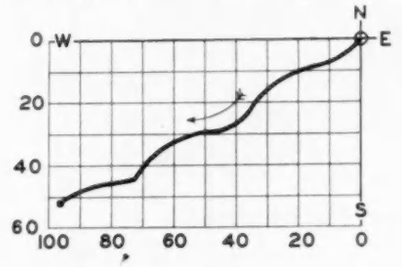


VERTICAL PROJECTIONS

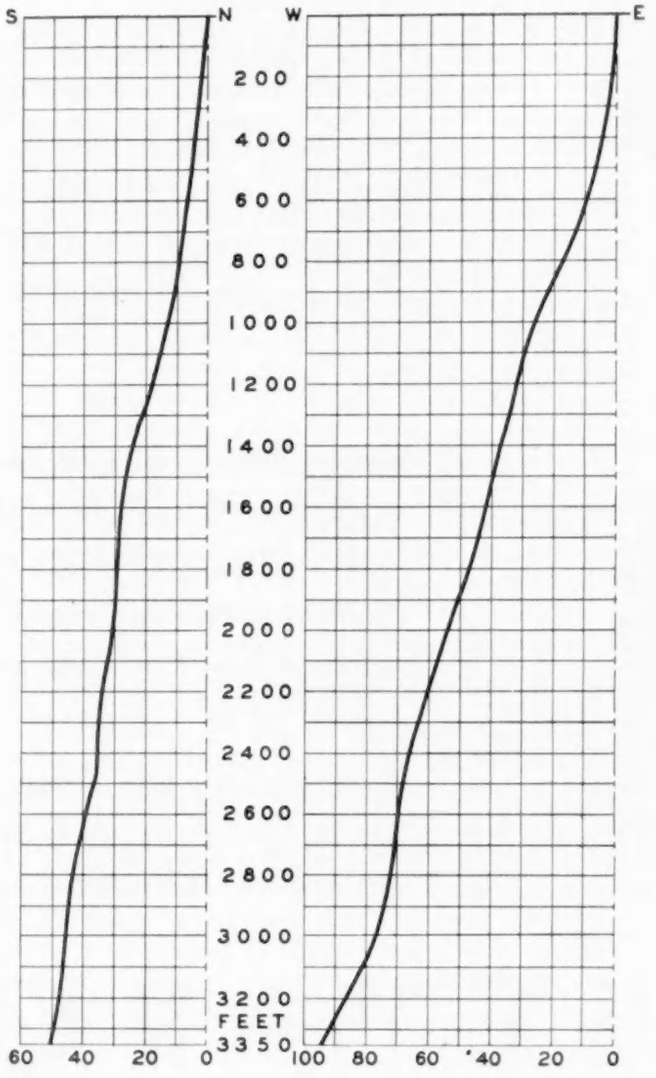


WELL D

HORIZONTAL PROJECTION

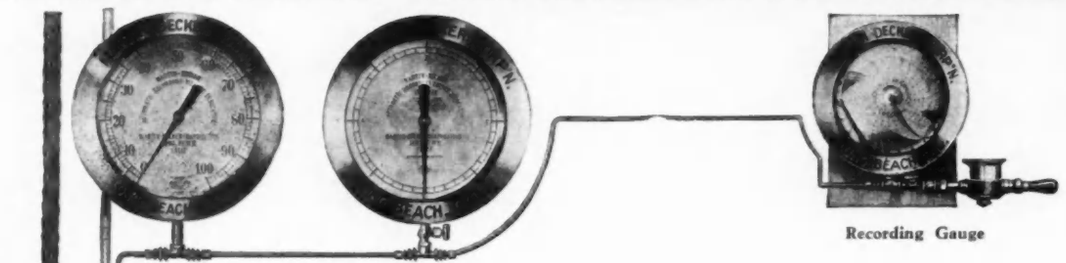


VERTICAL PROJECTIONS



READ THE STORY ON

VERSUS STRAIGHT HOLE AND



Weight Indicator

Vernier Gauge

Recording Gauge

Controlled drilling weight aids in drilling straight holes. Straight holes mean economy in drilling. Economy in Tools. Economy in Labor. Economy in Equipment. Economy in Pipe. But this economy does not stop with the completion of the well.

Martin Decker Weight Indicators, show, at all times, the weight—ON THE HOOK — ON THE BIT — OR ON THE CORE BARREL. Proper control of the drilling weight assures faster and more economical drilling all the way down.

Reed Roller Bit Company distributes Martin Decker Products in all fields east of the Rocky Mountains.

REED ROLLER

HOUSTON

CROOKED HOLE
PRODUCTION COSTS
THEN READ THIS AD

REED
MONEY SAVING TOOLS

ROCK BITS.

WIRE LINE BITS.

BARRETT-ROBISHAW DRILLING CORING BITS.

REAMERS.

CORE DRILLS.

A. P. I. TOOL JOINTS.

FULL HOLE TOOL JOINTS.

REPLACEABLE BLADE FISH TAIL BITS.

CASING ROLLERS.

FISHING TOOLS.

ETC.

If you start a hole straight and use Reed Reamers as shown at the right, your hole will remain straight.

Not only will they keep the hole straight, but out to full round gauge.

Note the six different points of contact with the wall of the hole.

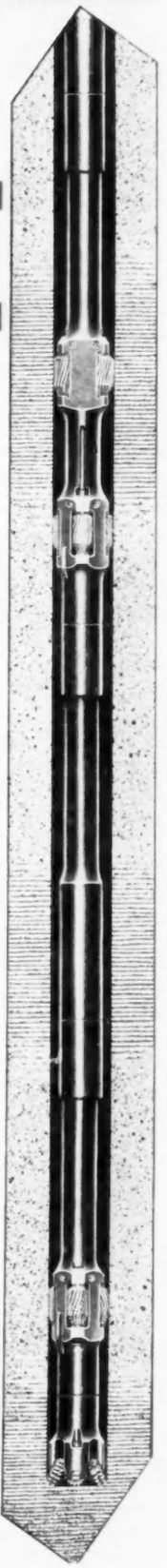
This staggered contact is one of the things which make REED REAMERS predominantly superior.

Drilling a straight hole saves time, money and equipment. Reed Reamers are an economy for any drilling operation.

and

Their economy carries on through the life of the well. Therefore take the LONG LOOK. Reduce your ultimate recovery costs by using REED REAMERS in drilling.

Standard reamers for all operations. Special reamers when required.



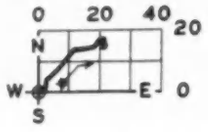
Tandem arrangement of Reed Type 31 Reamers for drilling straight holes.

BIT COMPANY
TEXAS

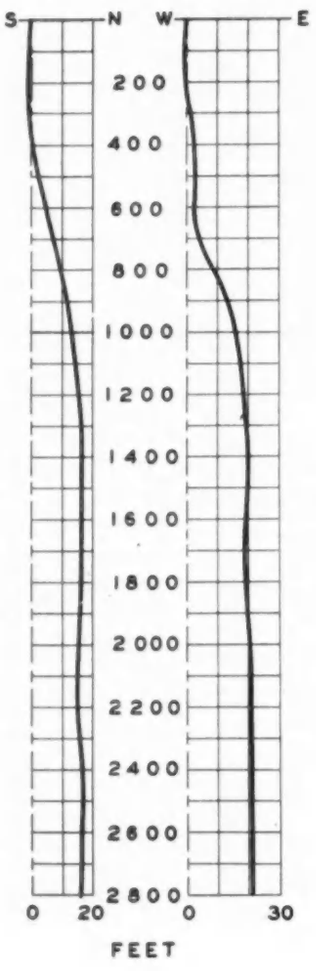
HORIZONTAL AND VERTICAL WELL PROJECTIONS

WELL E

HORIZONTAL PROJECTION

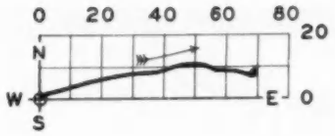


VERTICAL PROJECTIONS

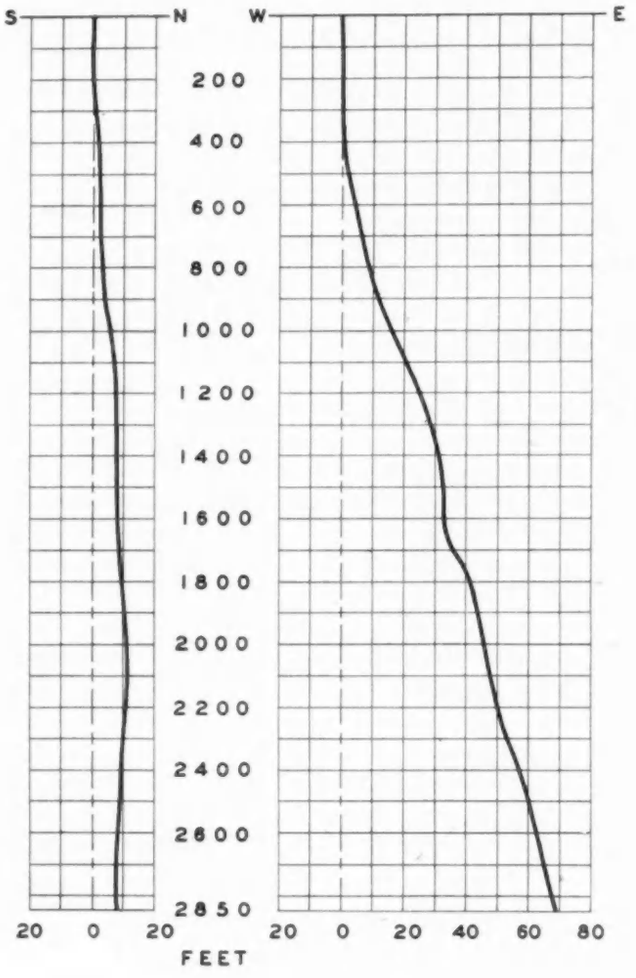


WELL F

HORIZONTAL PROJECTION



VERTICAL PROJECTIONS



ens the hole within a short interval to such extent that it is made truly vertical. In doing so he creates a sharp bend or crook in the hole—the kind that is indicated to cause high wear on the pumping rods. A bend of this nature would be indicated by an instrument recording only vertical inclination of the hole, provided the recordings were at the necessary short intervals.

Suppose, however, that the drilling bit is making a hole which slopes four degrees off vertical in a northerly direction, and that it suddenly encounters a boulder, crevice, or other obstruction which does not change the four-degree slope of the hole, but which deflects the bit sharply to the east. Here, too, a sharp and possibly troublesome bend would occur. For its detection, however, an instrument recording at short intervals and showing direction of inclination would be necessary.

Summarizing the evidence on straight hole drilling practice, it is indicated that a well which is to afford greatest efficiencies and economies of operation must not only be characterized by small angles of deviation from true verticality, but must also be free of sharp bends of any kind. For attainment of all these ends in drilling a well there is need for almost continuous surveying; with readings available at short intervals, covering at least the angle of inclination of the hole, in order to show sharp bends attending rapid changes in amount of slope, and preferably covering also the direction of inclination, to show bends accompanying sudden changes in direction of slope.

Relation between Straightness and Replacement Requirements

The courses of the six wells involved in this investigation are clearly revealed in detail through the accompanying projections and tables, and the effects of those courses on replacement costs are shown by correlating the projections and tables with records of the replacements. While such information is so correlated in an accompanying tabulation, a somewhat more detailed discussion may prove of value here.

Well A

Well A wandered off from the true vertical only slightly in any direction, going about 15 feet to the south and the east, but then swinging back so that at 2400 feet the hole was again directly under the well head, finally ending at 2950 feet about 16 feet almost due west of the spudding location.

All changes which did occur in the course, furthermore, with respect to changes of both direction and amount of slope were very gradual. Between 1200 and 1600 feet the inclination underwent a sudden, complete change of direction, with the hole ceasing to slope easterly and beginning to slope westerly. But the slope in either direction was very small, so that there was not a great net change in the inclination and therefore not an abrupt bend. Another change in direction, from southwesterly to northwesterly, around 2000 feet, afforded an even more gentle bend.

In view of the small and gradual changes of slope, and the small horizontal displacements, it would be expected that the rod wear in this well would be slight. Such a conclusion is in fact supported by cost records on the well, which show total absence of rod or pump replacements in 202 days of pumping.

Well B.

In contrast with Well A, the course of Well B wandered off considerably from the true vertical, deviating to the east over 60 feet, and to the south approximately 65 feet, so that the location of the bottom of the hole was found to be almost 100 feet practically due southeast from the surface location.

Despite the sustained swerving to east and south, however, the course of the well was remarkably free from abrupt changes. In wandering both to the east and to the south, the drilling bit did so very gradually, and without any marked wavering at any time in its general trend and its general slope, following a consistently smooth course.

There is a slight "dog leg" or bend in the well between 1800 and 2000 feet, due partially to an abrupt change in direction of inclination of the hole, and partially to an accompanying pronounced increase in amount of slope or inclination, the hole swinging around from an easterly to a southerly trend, with the amount of slope increasing from one degree at 1900 feet to five degrees at 2150 feet. Similarly there is a slight break in the even course of the hole within the last 50 feet surveyed, due to noticeable accentuation of the persistent easterly slope of the hole.

The two mentioned bends might be expected to cause some rod wear, but only a limited amount. Cost records on the well bear out that opinion. For the well had not required any rod or pump replacements at all after almost two years of pumping.

Well C.

Well C was relatively straight, and although it sloped persistently to the west and somewhat toward the north at times, the bottom of the hole was found to lie within 31 feet northwesterly from the surface location—the horizontal displacement being in practically the opposite direction from that of Well B.

There were no exceptionally sharp bends in Well C, but there was noted some "dog leg" effect between the depths of 600 and 1400 feet, where the hole increased in slope from ½ to 2 degrees, veering off at the same time toward the north; and again between 2400 and 2700 feet, where a bend was caused by a northward deflection of the hole despite maintenance of a rather uniform vertical inclination. These bends due to changes in amount and direction of inclination would naturally be expected to give rise to some rod wear, but in a slight amount.

Again the cost records sustain the evidence of the "straight hole" survey. For rod and pump replacements on this well during 730 days of pumping involved a total cost of only $145.20, or an average cost of 19.85 cents per day, with the well off production only 26 hours for installation of the new equipment, these replacement requirements being very moderate.

Well D.

Well D showed greatest horizontal displacement of all six included in the investigation, with the bottom of the hole 109 feet southwesterly from the well head, the drilling bit having slid off consistently in that direction, with very little wavering of that general trend.

Although the bottom of the hole was located a considerable distance horizontally from the well head, the drilling bit in reaching that point had done so by going down consistently at a relatively slight angle, rather than by veering off abruptly in that direction at any time.

While the well did not show any bends of consequence throughout its course caused by changes of direction of inclination, there were, however, three perceptible changes in amount of inclination, around 1400, 1900 and 2400 feet, which would be expected to interfere to some extent with proper functioning of rods and pump.

Judging by those gentle bends it would appear that the rod and pump replacements in Well D should be about the same as in Well C. The cost records bear out such indication in a general way, the average daily cost and down

RELATION between ROD and PUMP Replacement COSTS and Straightness of HOLES in SIX Pumping WELLS[1]

Showing the striking manner in which wells with high rod and pump replacement costs were revealed by surveys to have sharp bends in them, while wells of lower replacement costs were proportionately free of such bends or twists.

	Total Days Pumped	Rod Replacement Costs (in money and time)[2]				Pump Replacement Costs[3] (in money and time)[2]					Total Replacement Costs (in money and time)[2]	
		Actual Cost	Down Time	Actual Cost Per Day	Down Time Per Day	Actual Cost	Arbitrary Cost	Down Time	Arbitrary Cost Per Day	Down Time Per Day	Average Cost Per Day	Average Down Time Per Day
Well A.....	202	0	0	0	0	0	0	0	0	0	0	0
	Well's course wandered only slightly in any direction from true vertical, and there were no abrupt changes in slope of the hole. The survey therefore suggested that rod wear would be very slight, a conclusion confirmed in records on the well by total absence of rod and pump replacements in 202 days of pumping.											
Well B.....	622	0	0	0	0	0	0	0	0	0	0	0
	Although the well wandered in pronounced extent to east and south, so that the bottom of the hole lay nearly 100 feet southeasterly from surface location, the deviations were very gradual, and the hole was remarkably free of sharp crooks, only two slight "dog legs" being noted—at 1800–2000 feet, and within the last 50 feet surveyed. The survey consequently suggested that rod and pump replacement costs should be relatively low. That idea is supported by the cost records of the well, for no such replacements were required at all during almost two years of pumping.											
Well C.....	730	17.20	18 hrs.	2.35¢	1.45 min.	$128.00	$128.00	8 hrs.	17.5¢	0.67 min.	19.85¢	2.12 min.
	This well showed horizontal displacement of only 31 feet, and it had no exceptionally sharp bends, but there was some "dog leg" effect between depths of 600 and 1400 feet, and again between 2400 and 2700 feet. Those changes in inclination would naturally be expected to give rise to some rod wear, but in a slight amount. Again the cost records sustain the evidence of the survey, for very moderate replacement expenditures were required in 730 days of pumping.											
Well D.....	266	0	16 hrs.	0	3.65 min.	$51.87	$55.86	11 hrs.	21.0¢	2.48 min.	21.0¢	6.13 min.
	Although exceeding all other wells in this investigation in horizontal displacement, with the bottom of the hole 109 feet southwesterly from the surface location, this well veered off in that direction very gradually, without forming any very abrupt bends. Two slight bends around 1800 feet and 2400 feet, however, would indicate wear on rods and pump comparable with that in Well C. The cost records support that indication, average daily cost and shutdown time for replacements in Well "D" during 266 pumping days being slightly higher than in Well C.											
Well E.....	482	*$116.44	8 hrs.	24.2¢	0.99 min.	$244.00	$261.00	30 hrs.	54.3¢	3.74 min.	78.5¢	4.73 min.
	Although the bottom of the hole lacked only 26 feet of being directly below the center of the derrick floor, most of the deflection occurred within the first 1200 feet below the surface; and in that interval there were two pronounced bends or "dog legs", one at 200 feet and another, very sharp, around 600 feet. A less abrupt bend was also evidenced at 2000–2400 feet. These rather sharp bends would indicate greater rod and pump wear than in Wells "C" or "D". Cost records, involving 482 days of pumping operations, showed relatively high rod replacement costs, and highest pump replacement costs of all six wells surveyed.											
Well F.....	635	†$341.00	47 hrs.	52.2¢	4.44 min.	$217.32	$204.32	27 hrs.	32.3¢	2.55 min.	84.5¢	6.99 min.
	The drilling bit having slid off consistently in that direction, the bottom of the hole lay about 70 feet east of the well head. There was a sharp bend between 1400 and 1800 feet, the sharpest noted in all the six wells surveyed, and a gentler bend was found at 2000–2400 feet. The former bend would be expected to cause extreme wear to rods. Supporting that evidence, the rod replacement costs of this well as shown in cost records were higher than in any of the other wells surveyed; and pump replacement costs, likewise, were relatively high.											

*Changed 82 rod couplings.
†Replaced 2775 feet of rods.
[1]Such replacements as balls and seats, which are probably not affected by crooked holes, have been neglected. The costs shown are for equipment replaced only. No labor, power, or down time charges are included.
[2]Down time can of course be translated into additional monetary cost, since it involves labor and lost or delayed production.
[3]Two prices are shown for pump replacements. One is the actual cost, the other an arbitrary figure for the purpose of comparison. In the latter figure each size pump of the same make is given the same price. It is obvious that the use of the actual price would result in misleading conclusions when comparing two wells using different size pumps.

time for replacements in Well D during 266 pumping days having been slightly higher than in Well C.

Well E.

Well E showed small horizontal displacement, the drilling bit finally ending only 26 feet, northeasterly, from the surface location, with nearly all of that displacement accounted for within the first 1200 feet beneath the surface, below which level the hole extended almost straight down.

In the upper, sloping part of the well, there are two pronounced bends or "dog legs." The first, at 200 feet, is due largely to sudden change of the inclination of the hole from east to north. The second bend, around 600 feet, is very sharp, and in contrast with the higher bend, is due to change in amount rather than direction of inclination, an abrupt increase of slope occurring. There is also some evidence of a similar break, due to change in amount of inclination, in the neighborbood of 2000 to 2400 feet, but it is not abrupt.

From these rapid changes in inclination one would expect more wear on the rods than in Wells C or D, but would not expect any prohibitive wear, as the bends are not exceptionally severe.

The actual cost records on this well, involving 482 days of pumping, showed relatively high rod replacement costs, and highest pump replacement costs of all six wells surveyed, these combined costs not being as high, however, as in Well F, which is discussed below.

Well F.

In Well F the drilling bit slid off at a small angle, but very consistently, to the east, wavering very little to north or south, and ending with the bottom of the hole approximately 70 feet east of the well head.

The well was remarkably free of bends of the type resulting from changes of direction of inclination, since it maintained the mentioned easterly slope so consistently.

A series of sharp bends due to abrupt changes in angle of inclination occurred, however, between 1400 and 1800 feet, where the bit wavered from its general easterly slope to head straight down momentarily before resuming the easterly trend. A gentler bend also occurred from 2000 to 2400 feet.

The sharp bends first mentioned would be expected to cause extreme wear of the rods, as they are much more abrupt than any bends in any of the other wells surveyed.

The cost records support that evidence, for this well showed highest rod replacement costs of all the six wells surveyed, with relatively high pump replacement costs also. For less than two years of pumping, those replacement costs amounted to about $550, an average of nearly $1 a day, with down time for installation of the necessary new equipment exceeding three 24-hour days.

Power Consumption Costs

Rod and pump replacement costs were selected in this investigation as indexes to efficiencies and economies of pumping operations and thereby as possible indicators of crooked holes since they appear to be the most reliable indexes available. Power consumption costs may appear to have similar possibilities, but no attempt was made in these six wells to determine whether or not the power consumption reflected straight or crooked holes, since power costs were available on only four of the wells, the other two having been pumped by means of jacks.

Even where they are available, however, the power consumption records would be unsafe guides in comparing pumping efficiencies of different wells, with the wells all handling different quantities of oil and water, having different amounts of gas in association with the oil, and being characterized by various other individual operating conditions.

A well which is handling several hundred barrels of fluid, for example, would naturally be expected to require more power for the great weight involved than one handling only a few barrels, even perhaps despite some crookedness of the latter. It would not be correct, consequently, to assume here that the well with high power consumption is more crooked than the one with low consumption, figuring on the flat basis of daily per-well power requirements of the two wells.

The alternative which suggests itself, reduction of power consumption or costs to daily requirements per barrel of fluid handled, fails similiarly to give a fair index to pumping efficiency or crooked holes. For while the power cost tends ordinarily to increase with larger amounts of fluid handled, those increases are not in the same proportion; the power consumption tending to increase less perceptibly than the total amount of fluid handled, and being consequently relatively lower per barrel where larger volumes of fluid are handled. The per-barrel power cost therefore depends perhaps more on amount of fluid handled than on crookedness of the well or other factors. Thus if a well is pumping only one barrel of fluid daily, the power consumption of that well will be excessively high, for a considerable amount of power is needed to keep the rig running despite the negligible amount of fluid handled. If production jumps to 100 barrels daily there will be some increase in power consumption but not a particularly great amount. It is evident, consequently, that crooked holes are more or less overshadowed by other factors as causes for higher power consumption, and for that reason no great significance has been attached to power records. Since those records were determined, however, on the four wells where they were available, they have been included in an accompanying table.

To illustrate the difficulty of trying to find crookedness of a well reflected in power costs, those records show, for instance, that Well A, a straight well, had relatively low total daily power cost, but perhaps by virtue of handling only 45 barrels of fluid daily, rather than because of the straight hole; while the small amount of fluid caused the average per-barrel cost of lifting the fluid to be very high, relatively—four cents per barrel. Wells E and F, the most crooked of the six surveyed, had higher daily power costs than Well A, but possibly more because of handling larger volumes of fluid than because of the crooked holes. Furthermore, because of the larger fluid volumes the costs per barrel of fluid were relatively low—less than half as great as in Well A, the mentioned straight well. Well C, moderately straight, had highest daily power cost of the four wells on which costs were available, but a very definite reason for that high cost is apparent aside from any consideration of crooked holes, since the well was handling a conspicuously large volume of fluid. The large fluid volume

Well	Pumping Depth (feet)	Size of Tubing (inches)	Gross Fluid Lifted Per 24 Hours (barrels)	Power Cost per 24 Hours	Average Power Cost per Barrel of fluid Lifted
Well A....	3300	2½	45 (pipe line oil)	$1.85	4.12¢
Well B....	3325	2½	17 (pipe line oil)	*	*
Well C....	2815	2½	403 (80% salt water)	$5.35	1.33¢
Well D....	3300	2	12 (3% b. s. & water)	*	*
Well E....	2775	2	283 (70% b. s. & water)	$2.68	0.95¢
Well F....	3240	2½	158 (82% b. s. & water)	$3.00	1.90¢

*Power consumption not available because of well pumping from jack.

served, however, to bring the per-barrel lifting cost down to a figure which was very low, relatively.

Aside from crookedness of a well, there are of course numerous other factors entering into wear on rods and pumps; and they will not be the same even in wells of the same field. The replacement costs would be expected to increase, for example, with increases in depths at which pump barrels are set, size of tubing, and amount of fluid handled; and the costs would likewise probably be higher where the oil is accompanied by much salt water, since corrosion would be greater, or where the oil is "dead," having little gas in association with it to aid in lifting. Some of the wells likewise were troubled with sand and such trouble is a very important factor in considering pump wear.

Consideration of these various factors (see accompanying tabulation) in the six wells involved in this investigation fails, however, to point out any conclusive evidence of causes for high replacements outside of the crooked hole factor. Wells E and F for instance, which had highest replacement requirements, could not have had them because of greater pumping depths, for they were not pumping from as great depths as most of the other wells. There is some evidence that the high replacements in wells E and F may have been caused to some extent by relatively large amounts of fluid handled, by sand, or by corrosive effects of large amounts of salt water, since total fluid lifted and percentages of salt water were both relatively high for those wells, while the two wells, particularly well E, shows considerable sand. Yet both the amounts of fluid and the percentages of salt water were even greater in Well C, which had only one-fourth as high rod and pump replacements.

Similarly, Wells A and B, which had lowest replacement needs, could not have owed them to advantage in pumping depths, for they were pumping from greater depths than the other wells. There is some evidence that the low replacements in Wells A and B may have been caused to some extent by relatively small amounts of fluid handled, or by absence of corrosive effects by virtue of no salt water accompanying the oil. Yet the amount of fluid handled was even less and salt water was practically absent also in Well D, which had greater replacement requirements.

It appears from the above considerations that crookedness of the hole is the only factor which can be credited reliably or conclusively with having had material effect on the rod or pump replacements.

Vertical Inclination and Horizontal Displacement of Hole at Different Levels in Six Wells Surveyed

(Figures on vertical inclination represent angle of slope of the hole between indicated depths, thus revealing sharp bends; while figures on horizontal displacement represent actual number of feet that the hole deviates from true vertical between the specified depths.)

Well Depth	Vertical Inclination (Degrees)	Horizontal Displacement (Feet)
Well A.		
0— 50	0	0
50— 250	¼	1.7
250— 370	1	2.0
370— 450	1¾	2.4
450— 650	2	6.9
650—1120	1	8.1
1120—1420	½	2.6
1420—1920	1	8.6
1920—1960	¼	0.3
1960—2160	1¼	4.3
2160—2200	1½	1.0
2200—2350	2	5.2
2350—2500	2¼	5.8
2500—2650	2½	6.5
2650—2730	2	2.8
2730—2950	1¾	6.6
Well B.		
0— 460	0	0
460— 520	1	1.0
520— 550	1½	0.8
550— 630	2	2.5
630— 660	2¼	1.2
660— 760	2	3.4
760— 860	2¼	3.9
860—1300	3	22.7
1300—1550	2	8.6
1550—1600	1¾	1.5
1600—1700	1¼	2.1
1700—1900	1	3.4
1900—1940	1½	1.1
1940—2000	2	2.0
2000—2060	3	3.1
2060—2110	4	3.4
2110—2150	5	3.4
2150—2220	4	4.8
2220—2420	3	10.3
2420—2540	3½	2.2
2540—2670	4½	10.0
2670—2780	4	7.6
2780—2840	5	5.2
2840—3100	4	17.9
Well C.		
0— 200	0	0
200— 700	½	4.3
700—1000	1	5.2
1000—1900	2	31.0
1900—2300	1	6.9
2300—2850	1½	14.2
2850—3000	1	2.6
Well D.		
0— 30	0	0
30— 260	1	4.0
260— 560	1½	7.7
560— 700	2½	6.0
700— 910	3	10.8
910— 930	2¾	1.0
930— 970	2½	1.7
970—1120	2	5.1
1120—1300	2½	7.8
1300—1420	2	3.1
1420—1770	1½	9.1
1770—1940	2½	7.3
1940—2150	2	7.2
2150—2750	1	10.3
2750—2850	1½	2.5
2850—3100	3	12.9
3100—3270	3½	9.0
3270—3350	4	5.5
Well E.		
0— 500	½	4.3
500— 560	1	0.3
560— 600	1½	1.0
600— 700	2	3.4
700— 850	2½	6.5
850— 880	2¾	1.6
880— 940	3	3.1
940—1060	2½	5.2
1060—1100	1½	1.1
1100—2000	1	15.5
2000—2800	½	6.9
Well F.		
0— 200	0	0
200— 250	½	0.4
250— 350	¾	1.3
350— 500	1	2.6
500— 700	1½	5.2
700— 850	2	5.2
850— 950	2½	4.3
950—1100	3	7.7
1100—1240	2½	6.0
1240—1440	2	6.9
1440—1540	1¾	3.0
1540—1900	1½	9.3
1900—1980	1	1.4
1980—2100	1¼	2.6
2100—2180	2	2.7
2180—2450	2½	11.6
2450—2500	2	1.7
2500—2570	1½	1.8
2570—2820	2	8.6
2820—2850	1	0.5

THE CALL of the WILDCAT

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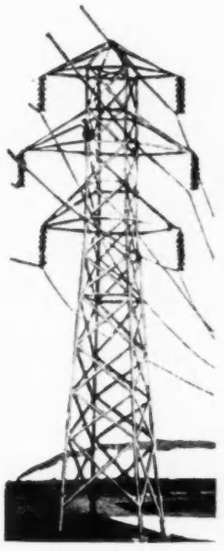

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General Offices

BEAUMONT, TEXAS **LAKE CHARLES, LA.**

CALIFORNIA FIELDS

Santa Fe Springs Wells Being Deepened to or Plugged Back to Meyer Zone. New Record at Kettleman.

BRAD MILLS, *Staff Representative, Los Angeles, California*

North Dome Test Nearing Record Producing Depth

Coalinga, Calif. — Associated Oil Company is within striking distance of a record production depth for the field in Whepley 3, North Dome well which is drilling at 8825 feet. The hole was reamed to bottom for completion at 8790 feet, but more formation will be included in the production test. The deepest producing well in the field is Kettleman North Dome Association's No. 21-1P, which was recently completed at 8997 feet.

Kettleman North Dome Association will deepen No. 36-30J, edge well which flowed water from 8540 feet on a recent production test. This well is perilously near the edge of the field, but it may produce from the lower portion of the Temblor.

Union Oil Company has reached 6300 feet in remarkable time in King 2, second North Dome well to be drilled on a quarter section acquired some time ago at a record price.

Universal Consolidated Oil Company is drilling at 5833 feet in Bunting 1, Middle Dome test which is being watched with wide interest. This well is located a good distance from the discovery wells, and the outcome will help to determine the size and importance of the Middle Dome.

Petroleum Securities Company has made little headway in fishing for casing and junk in Burbank 1, Middle Dome test which was really the discovery well for this part of the field. The hole has been taking fluid to aggravate a bad situation, and in addition the casing is bad and iron has been lost in the hole.

Deep Tests Stimulate Santa Barbara County Interest

Santa Barbara, Calif.—Recent and present deep tests in Santa Barbara County should go a long way toward stimulating wildcatting in the district, but it may require more definite proof of improvement in the industry to account for a decided increase in this type of field work. The recent establishment of a new depth record, drilling on Santa Rosa Island, and discovery of a small field or two will eventually be reflected in increased leasing activity.

Western Gulf Oil Company has recovered most of the left hand drill pipe in Bradley 1, record wildcat which was drilled to 10,294 feet, and may be able to deepen this test soon. The well is located in the Santa Maria district and was drilled to a record depth in a short time after passing 9000 feet.

Standard Oil Company is coring a hard gray sand at 2715 feet in No. 1 on Santa Rosa Island. This is the first well drilled for oil on the island and is a very important test.

Palms Wildcat Will Try Where Others Failed

Los Angeles.—Another well will be drilled in the Palms district, the latest test having been started by Palm Ridge Oil Company on Section 2-2-15, about two miles northwest of the Inglewood field and a short distance from two abandoned holes. The undertaking appears to be sponsored largely by real estate interests, but elaborate plans are being made for drilling the wildcat, and the location does offer some promise. Pan American Petroleum Company drilled a well to 4600 feet a short distance north of the new location, while Union Oil Company drilled to 5875 feet in a test a mile to the west. Major operators favored the district for some time, but abandoned it after several tests. The newest location should not be condemned because of other failures, but the usual odds against wildcats seem to prevail.

Deepened Producer Gives San Miguelito New Value

Ventura, Calif.—Speculation continues as to the importance of the new San Miguelito field, located about midway between the Ventura Avenue and Rincon fields, but it is generally admitted that the structure holds wide possibilities. Recompletion of Continental Oil Company's Grubb 1, the discovery well, at 7145 feet with an initial flow of 2400 barrels of clean oil placed a new value on most leases. This well was originally completed as a 600-barrel producer at 6750 feet.

Although there is undoubtedly a connection between San Miguelito and Ventura Avenue, outcrops show them to be separate structures. They are along the same uplift, but do not have identical characteristics. Little drilling has been done in the San Miguelito field, and it is difficult to compare the two structures. The newer field appears small, but it may extend farther than present lines show.

Chanslor-Canfield Midway Oil Company is still producing Hobson A2 on the compressor, after plugging back to 7900 feet from 10,030 feet. This is sometimes regarded as the discovery well, but a production of around 150 barrels is hardly profitable for such a depth.

Midway "Deepest" Well to Try Further for Production

Taft, Calif.—Standard Oil Company of California announced August 23 that it will deepen Mascot 1, a well in the Midway field which was drilled to 9629 feet more than two years ago and shut down without a test. A recent production test was made to fulfill lease requirements, but only water followed the swab. This well was for a time the deepest in the world, and was drilled in a district noted for shallow producers. Deepening the well will not be a difficult job, as drilling below 9000 feet was accomplished with little trouble. The formation was ideal for coring, and some of the cores recovered were almost perfect. No intention to establish a new record is nursed, but the well will not be abandoned until the possibilities of the district are fully determined.

Santa Fe Springs Wells "Adjust" to Meyer Zone

Los Angeles.—The move to plug back to and deepen to the Meyer zone at Santa Fe Springs has become more pronounced, with a dozen changes under way and more to start soon. Standard Oil Company, Wilshire Oil Company, General Petroleum Corporation, Union Oil Company and others are considering more exhaustive efforts to get Meyer sand production while it is still good.

Injection of a large quantity of gas into the zone over a long period has increased interest in the zone, although many operators who are now trying to get more oil from it did not participate in this storage. Wells nearest to the injection points will profit most, but the entire field will be benefitted to some extent by the efforts of one company that stored enormous quantities of natural gas with the hope that it would do most good on certain large leases.

The fact that the Meyer zone is so

much shallower than several producing sands is a big advantage in pumping and flowing on compressors. This is the most dependable zone, regardless of depth, and the desire for a steady production of light oil has prompted the present action.

Fruitvale Drilling Shows Promise of Continuing

Bakersfield, Calif.—Leading Fruitvale operators would like to complete all drilling before winter, but offsets may force the present level of activity for some time. Efforts to extend the field and the desire of a few operators to drill their leases as soon as possible have forced the more conservative companies to protect their leases.

General Petroleum Corporation has completed Hensley 1 as a good well, to break into the producing column for the first time. The lease was acquired some time ago, but the first well was drilled only after offsets were completed on adjoining leases. Hensley 1 was drilled to 3925 feet and came in flowing nearly 1000 barrels of 22.6 gravity oil.

The Fruitvale field is odd in some respects, producing only a small amount of natural gas with a fairly steady flow of oil. The pressures are high enough to establish a good average initial production under favorable conditions.

Operators Interested in Ventura County Leasing

Fillmore.—Leasing activity in various parts of Ventura County has spread to the Fillmore-Piru district, the latest including a considerable exchange of acreage on the Buckhorn anticline. Major oil companies previously held acreage in the immediate district, and are desirous of obtaining more of the land. Shell Oil Company, The Ohio Oil Company, Rio Grande Oil Company, Hancock Oil Company and others hold acreage on and near the Buckhorn anticline. Harry Sankey, an independent operator, has leased around 1000 acres on the structure and is now negotiating with large oil companies toward the development of his holdings. A well may be drilled on Section 23-4-19 by joint operators. The top formation is a shale, but the Vaqueros and Sespe should be reached at reasonable depths. The possibilities of commercial production at nominal depths in this district have attracted several large operators who are desirous of obtaining a steady production of light oil.

Long Beach Operators Seek New Producing Levels

Long Beach.—In the absence of an occasional large completion to stimulate interest, Long Beach operators are feeling around for new levels at which to complete their wells. In the past, good wells have been completed here and there, the discovery having been followed by a rush to develop that particular stratum, but few good producers have been completed this year at any depth. Slight extensions of the various deeper strata have also increased activity in the south, southeast and Los Cerritos extensions from time to time. The present development is centering around 5000 feet, but the average initial production has been low. The belief is still held that a good production will be developed in a schist around or above 10,000 feet, but such a theory may be branded as "wild." The cost of drilling to such a depth is hardly justified by present oil prices. Shell Oil Company drilled to 9280 feet in Nesa 11, but failed to get any oil at this depth. There is a possibility that this well stopped short of production, but nobody has questioned this strongly enough to prove it.

Buttonwillow Deep Test Met Plenty of Difficulties

Bakersfield, Calif.—Abandonment of Wilshire Oil Company's efforts to make a producer of Salisbury 1, deep test in the Buttonwillow district, removes an interesting Kern County wildcat from the active list, but no official abandonment notice has been filed by the Nordon Company, to which the lease may revert if quit-claimed by

California Field Developments

Completions

FRUITVALE—		
General Pet. Corp., Hensley 1	850	3925
Mohawk Pet. Co., No. 11	300	4089
KETTLEMAN HILLS—		
Kettleman North Dome Association, No. 81-10P 3300		8551
LONG BEACH—		
Drillers Pet. Corp., Bernstein 1	250	4912
L. W. S. Oil Co., Sterling 1	100	4627
S. S. Wortley, No. 3	100	4960
SANTA MARIA—		
Union Oil Co., Newlove 51	150	3450
SOUTH MOUNTAIN—		
E. F. Carroll's Lemon 1, 22-3-21..	*	2460

New Operations

BELRIDGE—Continental Oil Co., Result 3, 36-27-20.

KETTLEMAN HILLS—Standard Oil Co., No. 81, 27-22-19.

VENTURA AVENUE—Associated Oil Co., V. L. W. 26, 26-3-23.

NORTHERN CALIFORNIA

Wildcat Drilling Report

(Wells shut down not included)

KERN COUNTY

BLACKWELL'S CORNER—Fred Fowler's Lincoln 1, 15-26-19, sd 3165 ft.

BUTTONWILLOW—General Pet.'s Morris 1, 6-28-23, rigging to sp; Morris 2, 6-28-23, material on ground. Milham Exploration Co.'s Crites 1, 8-28-23, plugged to 2800 ft, td 4496 ft, will test upper showings; Page 1, 6-28-23, plugged to 3125 ft, sd.

DEVIL'S DEN—A. S. Halloway's Lincoln 1, 11-25-18, dr shale 200 ft. Pyramid Hills Oil Co.'s Gauthier 1, 24-25-18, making test, td 1725 ft. Tom Hannah's No. 1, 25-25-18, loosening 6¼-inch cas, td 3455 ft.

McKITTRICK — Welport Oil Co.'s No. 2, 19-29-21, dr shale 600 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Casitas Oil Co.'s Schudde 202-1, bldg pier.

COAL OIL POINT—Bolsa Chica Oil Corp.'s No. 191-1, redrilling 3278 ft. Equity Oil and Gas Co.'s No. 159-1, dr shale 3650 ft.

CUYAMA—Cuyama Valley Oil Corp.'s No. 1, 12-10-27, rigging rotary.

LOS ALAMOS—Barnsdall's Careaga 1, 31-3-33, making production test at 5331 ft, will plug back and test upper showings.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, fsh for left hand drill pipe at 8800 ft, td 10,294 ft.

SANTA ROSA ISLAND—Standard's No. 1, dr hard gray sand 2715 ft.

VENTURA COUNTY

CONEJO—American Oil Co.'s Powell 1, 33-2-20, co 2030 ft.

HOPPER CANYON — Bardeen Oil Co.'s Lankershim 2B, 13-4-19, co 2757 ft.

RINCON—Indian Pet. Co.'s No. 1-82, bldg isolated pier in ocean. Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, coring shale 4100 ft.

SAN MIGUELITO—J. W. Miller's Valenzuela 1, 23-3-24, laying lines.

SANTA PAULA—L. M. Lesperance's Boosey 1, 31-4-20, rig. J. W. Mosher's Anlauf 1, 22-4-21, dr shale 500 ft.

SESPE—Harmon and Deal's No. 1, 33-5-19, dr shale 705 ft. H. A. Iver's Star 7, dr hard sand 600 ft. Merchants Pet. Co.'s Cochran 1-7, rigging rotary.

SIMI—C. and H. Anderson's Marr 11, 36-3-18, co 1885 ft.

TIMBER CANYON—Superior's West 3, 13-4-21, dr hard sand 3300 ft.

MISCELLANEOUS

KINGS COUNTY—Kettleman Reef Ridge Oil Co.'s Seymour 1, 10-23-16, co 1150 ft; Seymour 2, 10-23-16, lcn. Knudsen and Schmidt's Avenal 1, 36-23-17, co 5640 ft. Triune Oil, Gas and Land Co.'s No. 1, 5-23-20, dr shale 1115 ft. Glen Woodward's No. 1, 32-22-20, will deepen from 550 ft.

MERCED COUNTY—Harry Bergman's Ora Loma Farms 1, 12-12-11, lcn. Los Banos Pet. Co.'s No. 1, 26-10-9, rig.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1, 19-23-15, dr shale 250 ft.

SAN LUIS OBISPO COUNTY—Emerich Oil Co.'s Holland 1, 22-32-22, bailing water and trace of oil, td 1840 ft. Kent & McDonald's No. 1, 3-32-22, sd 2675 ft. Panorama Oil Co.'s Panorama 1, 7-31-21, co 4010 ft. J. D. Martin's Pricco 3, 5-32-13, dr shale 250 ft. Shell's Mahoney 1, 4-25-12, rigging rotary.

TULARE COUNTY — Sheldon and Gholson's No. 1, 34-22-27, dr sand 925 ft.

SOUTHERN CALIFORNIA

Orange Thorpe Corp.'s Skinner 1, 32-3-10, dr shale 4485 ft.

MONTEBELLO—Allen McNiel's Fee 1, 7-2-11, rig.

NEWHALL—W. T. Ball's Newhall 1, 34-3-16, dr gray sand 3165 ft. Naval Reserve Oil Co.'s Trumble 1, 6-3-15, dr out cemt 1250 ft. Spencer and Brubaker's Newhall 1A, 8-3-16, co after sp.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, co 7405 ft.

PLAYA DEL REY—Cooperative Dev. Co.'s No. 1, 26-2-15, dr shale 4465 ft.

SAN JUAN CAPISTRANO—Mineral Exploration Co.'s Echiniquel, 8-8-7, dr shale 1658 ft.

the present operator. This well was drilled to 6990 feet after extended efforts to conquer heaving shale, caving formations and water strata, but was plugged back for a test of the upper showings above 5000 feet. The Buttonwillow district is regarded as one of the most difficult in which to operate, and drilling to a depth of nearly 7000 feet was a real achievement. Presence of gas in the upper sands in the main Buttonwillow field has been regarded as an indication that oil should be found in the lower formations, but commercial production has never been developed in this part of the valley. A large gas production has been developed by Milham Exploration Company in the main Buttonwillow field.

Plan Deepening Belridge Well to Deep Production

Taft, Calif.—Union Oil Company is considering deepening Belridge 17 to the productive zone recently opened around 8000 feet by Belridge Oil Company, and has killed the well to recover the three-inch liner. This North Belridge producer was originally completed in the Temblor formation at 5605 feet, and produced a small amount of light oil until killed recently. The daily output had declined to 75 barrels.

Belridge Oil Company holds the key position in the field, having the bulk of the leases on top of the structure. This company has completed three good wells in the Temblor zone and one in a formation still deeper. The deep well was recently given an initial production of 3000 barrels and shut in. This test was drilled to 8062 feet to open up a zone which has not been definitely identified.

Federal Injunction Stops East Texas Proration Suits

Tyler, Texas.—A federal court order restraining the Texas Railroad Commission and the Attorney General of Texas from prosecuting suits approximating one-half million dollars against American Liberty Oil Company, Clint W. Murchison, Dudley S. Golding and others has been entered here upon orders issued August 25 by Judge Randolph Bryant, Sherman. The injunction is to remain in effect until after a trial of the Constantin-Wrather et al injunction suit against the commission is held on its merits in September.

Penalties for violating proration restrictions were sought by the commission against Muchison, Golding et al, owners of a number of properties in the East Texas oil field, in a suit filed in District Court at Austin, last month.

KANSAS FIELDS

Extension Further Proves Probability of Many Pools in Central Western Kansas. Well Shows Big Gas Output.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Siliceous Lime Production Given Big Extension in Kansas

Wichita, Kans.—Siliceous lime production was extended approximately 25 miles to the southeast during the past week when Skelly Oil Company completed Leisman 1, CSE SW Section 20-27s-10w, in the Miles or Cunningham area of northwestern Kingman County. This test has been of interest for several months. Late in June operators encountered top of the Kansas City-Lansing Group at 3374 feet and had first oil at 3418 feet. The showing was passed up after having a hole full of oil at 3465 feet. Top of the Viola limestone was found at 3922 feet and six-inch casing set at 3919 feet. While drilling the plug and still eight feet off bottom, dry gas broke in blowing the tools up the hole and resulting in a bad fishing job. After the fish had been recovered and the hole cleaned out the well gauged better than 26,000,000 cubic feet of gas. Five-inch casing was cemented on top of the Arbuckle "siliceous" lime at 4093 feet with total depth at 4190 feet and no oil showing. During the past week it was deepened to 4195 feet and the hole unloaded. Production for the first hour was 40 barrels of oil cutting three-fourths of one per cent B.S. and showing a trace of water, which is more than likely circulating water. During the first 15 hours it produced 395½ barrels, hourly gauge ranging from 17½ to 40 barrels. At the end of this time the water trace had almost disappeared and the well was cleaning up in nice shape.

Big Gas Output

In addition to being an important extension, the well is out of the ordinary in that the Arbuckle lime is showing 26,058,000 cubic feet of gas, considerably more than usual for that formation. Most Arbuckle lime wells head when first completed and have to be placed on the pump before production of commercial size can be obtained. The nearest Arbuckle production is from Midwest Refining Company's Richardson 36, SE SE SE Section 36-22s-12w, which was given an estimated potential of 1800 barrels at 3599 feet.

Slick et al's Breford 1, CSW SW NW Section 7-17s-10w, second wildcat completion of the week in Arbuckle lime, is shut in, estimated at 20 barrels an hour from the lime at 3395 feet. Top of the conglomerate was found at 3345 feet and the first pay at 3384 to 3387 feet, put 2400 feet of oil in the hole. During the first four hours after encountering the second pay at 3395 to 3398 feet, the fluid column raised to 3200 feet from bottom. The new well is located in southwestern Ellsworth County about three miles from production.

Shell Petroleum Corporation has 2900 feet of water and probably will abandon Murphy 1, CNW NE Section 4-19s-9w, directly south of the Carter et al's Ploog discovery well. Operators had 2400 feet of water in the hole in one hour from Arbuckle lime at 3270½ to 3272 feet but continued drilling. Shale and mixed limestone beds were logged from 3272 to 3325 feet, the present total depth. Water increases were obtained at 3281 to 3286 feet, and at 3322 to 3325 feet.

Large Number of Pools

There is little doubt that a large number of pools will eventually be discovered in Central Western Kansas, but the results so far obtained indicate that many disappointments will be scored before the areas are defined and that much of the lime production will turn to water early. The most recent water well in the district is Aylward et al's Stratman 1, CSE NW SE Section 1-17s-10w, discovery well in the Stratman pool. It was completed April 15, 1931, for an initial production of 117½ barrels swabbing from Arbuckle lime at 3255 to 3271 feet. Production is now estimated at 65 barrels an hour cutting eight per cent water. Operators were pulling the rods and tubing to ascertain source of water if possible.

National Refining Company was drilling below 3100 feet after setting eight-inch casing at 2989 feet in Shuman 1, CSE SE SW Section 16-19s-9w, north offset to Muth Brothers' Beyer discovery well. Beyer 1 was completed February 7, 1931, with an initial production of about 16 barrels per hour from Arbuckle lime at 3213 to 3244 feet.

Mid-Kansas Oil & Gas Company was drilling below 4600 feet in Converse 1, CSW NE NE Section 30-24s-18w, Western Kansas wildcat located about 10 miles

northwest of the McCarty or Trousdale pool in north central Edwards County. The chat horizon had not been reached at the present drilling depth. Initial production in the McCarty or Trousdale pool ranges from two to eight million cubic feet of gas and from 20 to 520 barrels of oil found at an average depth of 4590 feet in the upper horizon and at 4962 feet in the lower.

Hollow Pool

J. E. Mabee and Shell Petroleum Corporation completed Martens 1, NW NE NE SE Section 19-22s-3w, flowing 857 barrels the first 24 hours and rated at 35 barrels per hour at the end of the first gauge. Production is coming from Hunton lime at 3465 to 3475 feet. It is the fifth Hunton lime completion in the pool which is the first area in the state to produce from that formation. Producers and Refiners Corporation and T. C. Johnson have announced location for No. 1, CNE NW SE Section 19-22s-3w.

Barnsdall Oil Corporation and Indian Territory Illuminating Oil Company had top of the chat horizon at 3280 feet and set eight-inch casing at 3285 feet in Baughman 1, CNW NE Section 34-23s-4w, in the southern portion of the Black area in northeastern Reno County. At 3427 feet the hole was loaded and the formation showed three to four million cubic feet of gas with no oil. It will be drilled ahead with rotary tools.

Ford County

Swain Oil Company et al's Taylor 1, CNW Section 21-25s-24w, completed as a dry hole at 5105 feet on September 30, 1931, found top of the Viola lime at 5186 feet while drilling deeper during the past week. At 5205 feet operators had a show of oil and 4000 feet of water in the hole. Four-inch casing was set on top of the Viola lime and drilling continued to 5209 feet. A sample taken from bottom shows some gas but no oil and the hole will be bailed down to test.

Marion County

Darby Petroleum Company et al announced location for Pankratz 1, CNW NW SE Section 5-20s-1e, approximately five miles southeast of production in western Marion County. The test will be located in a township which has never been drilled and on a 1600-acre block belonging to Darby Petroleum Company and several major companies, Magnolia Petroleum Company assembled the block.

Kansas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
COWLEY COUNTY—		
Slocum et al, Backer 1, ne nw ne 27-23-4e	60	2382
ELLSWORTH COUNTY—		
Skelly Oil, Melchart 1, c nw nw sw 6-17-9w	*	3294
GREENWOOD COUNTY—		
Ward McGinnes, Edwards 6, se nw ne 33-23-11e	*	1985
Paulhamus-Smith, Blanchot 1, c se se ne 5-24-12e	40	1833
Sheedy et al, Gilroy 2, cn½ ne 13-25-12e	*	1586
Mendenhall et al, John 2, c ne ne 8-25-13e	50	1690
McPHERSON COUNTY—		
Darby Pet., Fletcher 1, swc 16-19-1w	350	3411
Darby Pet., Kaegi 2-A, c sw se ne 20-19-1w (owdd)	40	3390
Broadwell O&G, Giffen 1, 14-19-2w c nw sw (owdd)	720	2967
Giffen 2, c sw sw 14-19-2w (owdd)	¶9-288	2961
Vernon O&G, Drum 3, c sw sw ne 35-19-2w	3888	2948
Shell Petroleum, Johnson 3, c ne ne sw 35-19-3w	237	3032
SALINE COUNTY—		
Twin Mounds Oil, Weis 1, csl nw ne nw 20-13-4w	*	3525
SEDGWICK COUNTY—		
Shell Pet., Brown 3, ne se sw 15-26-2e (owdd)	410	3205
Schweiter, Fee 1, cwl se se se 27-27-1e	¶2½	1504
WOODSON COUNTY—		
McGinnes, Snyder 2, sw ne sw 31-23-14e	*	....

New Operations

BARTON COUNTY—Tarrey et al, 1, c nw se se 12-20-11w.

BUTLER COUNTY—Flint Hills, Martin 5, cnl nw ne 27-28-4e.

COWLEY COUNTY—Roth et al, Brant 5, c ne sw ne 12-32-4e. Deal Oil, Cavitt 1, se sw se, lot 7, blk 15, 22-32-4e. Roth et al, Moncrief 7, ne nw se 22-32-4e.

FINNEY COUNTY—Joe Denham, Brown 1, c sw 16-25-34w.

GREENWOOD COUNTY—Young, Goffman 1, c sw se ne 10-24-12e. Hufford, Thrall 1, cn½ ne ne 17-24-12e. Paul et al, Bryden 1, nwc sw 31-25-9e.

MARION COUNTY—Darby-Magnolia, Pankratz 1, nwc se 5-20-1e.

McPHERSON COUNTY—Shell Pet. Lawrence 2, c sw ne nw 35-19-3w.

SEDGWICK COUNTY — Continental Oil, Smith 2, cwl se ne se 16-25-1e.

TREGO COUNTY — Central Commercial, King 2, c se sw ne 20-13-21w.

WOODSON COUNTY—Absher et al, 1, ne c 26-23-13e. Nye et al, Schaffer 2, se se sw 31-23-14e.

Wildcat Drilling Report

(Wells shut down not included)

SUMNER COUNTY—Austin et al, Foy 1, sw se se, 14-34-1w, 15 inch 298 ft, dr 1550 ft.

HASKELL COUNTY—Victor Martin et al, Weeks 1, c nw, 8-28-31w, rig.

SEDGWICK COUNTY—Cameron and Great Basin, Landson 1, c se nw, 13-28-2e, 8-inch 2010 ft, td co.

PRATT COUNTY—Ninnescah O&G, Hardesty 1, sw se se 28-27-11w, td 2000 ft, sd.

SEDGWICK COUNTY — Scroggins et al, Bartlett 1, nw se nw nw 35-27-1e, dr 1065 ft.

FINNEY COUNTY—Joe Denham, Brown 1, c sw 16-25-34w, bldg rotary rig.

FORD COUNTY—Swain et al, Henthorn 1, c nw, 21-25-24w, td 5205 ft, prep to run 4-inch casing.

EDWARDS COUNTY — Mid-Kansas, Converse 1, sw ne ne 30-24-18w, 8-inch 4262 ft, dr 4310 ft.

HARVEY COUNTY—Liggett et al, Davis 1, sw se ne, 7-24-1e, T. chat 3050-78 ft, hfw, td 3127 ft, sd.

FINNEY COUNTY — National Refg. Co., Wells 1, swc 13-23-30w, base Big L. 5300 ft, dr 5645 ft.

HARVEY COUNTY—Herndon et al, Santa Fe 1, nw sw 19-23-1e, 20 inch 61 ft, dr 1010 ft.

MARION COUNTY—Darby et al, Pankratz 1, nw se, 5-20-1e, cellar.

RUSH COUNTY—Barnsdall et al, Schultz 1, swc, 3-19-16w, 15 inch 401 ft, dr 885 ft.

BARTON COUNTY—Skelton Oil, Ott 1, c se se 16-19-14w, Sil. L. 3530 ft, td 3604 ft sd.

McPHERSON COUNTY — Snyder et al, Carlson 1, se c 4-19-3w, 15-inch 1530 ft sd.

MARION COUNTY—Detrick et al, Dalke 1, nw se 16-19-1e, 10-inch 2000 ft, dr 2229 ft.

BARTON COUNTY — Smith, Ash et al, Wilson 1, c nw sw 13-18-14w, dr 276 ft.

ELLSWORTH COUNTY—Slick et al, Dreford 1, sw nw 7-17-10w, oil 3140-50 ft, flowed 270 bbls 24 hrs; swb 5 bbls. per hr. at 3155 ft, increase at 3167 and 3215 ft, Sil. L. 3371-77 ft, td, so., sd for 6 inch cas. Leo Morgan et al, Andrews 1, ne sw 3-17-8w, spd and sd.

McPHERSON COUNTY — Sidwell et al, Nichols 1, ne nw nw 28-17-1w, 15 inch 580 ft, dr 1205 ft.

ELLSWORTH COUNTY—Raymond Gear et al, Sauberli 1, c sw se 29-16-9w, 10 inch 1964 ft, dr 2815 ft. Phillips, Hochman 1, ne nw se 17-16-7w, moving in tools.

FRANKLIN COUNTY—Smith et al, Malcher 1, c sw sw 34-15-19e, dr 630 ft.

ELLSWORTH COUNTY—Gurley Bros. & Barnsdall, Union Pacific 1, nw sw 7-14-7w, ru. Walker Oil, Remley 7, sw se ne, 23-14-7w, 10 inch 2188 ft, dr 2630 ft.

DOUGLAS COUNTY—Colby et al, Featherson 1, c se 27-14-18e, machine. Pure Oil, Lemb 1, nw se, 31-14-19e, dr 400 ft.

SALINE COUNTY—Twin Mounds, Weis 1, c w½ ne nw 20-13-4w, (owdd) (?) T. Simpson 3525 ft, td hfw, sd for orders.

WABAUNSIE COUNTY—West et al, Korb 1, cnw ne 32-10-13e, dr 575 ft.

Stabilization Motif of A. I. M. E. Program

Ponca City, Okla.—A comprehensive stabilization program for the petroleum industry is an objective which will be sponsored by the petroleum division of the American Institute of Mining and Metallurgical Engineers in its two-day meeting at Ponca City, September 30 and October 1.

Dr. C. K. Leith of the University of Wisconsin, and W. S. Farish, president of Humble Oil & Refining Company, will present the broad outlines of such a program, and others will also discuss certain features of the plan.

Pointing out some of the phases of the suggested plan, Earl Oliver, chairman of the petroleum division, expressed the desire that there be stimulated public interest and thought on the essential features of the program prior to the meeting, saying he believed such premeditation might not only add to the success of the meeting but also react to the benefit of the industry.

The features of the stabilization program which he pointed out as being outstanding include the following: (1) Recoverable oil and gas content of land as a suitable standard of each owner's right. (2) Reservoir energy: its source, ownership, and utilization. (3) Restricting output to market demand. (4) Interstate compact: its purpose and scope. (5) Developing united action and public support. (6) Subsidiary issues (second day): bottom hole pressures; appraisal of various methods of proration; and natural and artificial methods of water flooding.

OKLAHOMA FIELDS

Big Producers in Oklahoma City Pool. West Seminole Well Makes 17,321 Barrels on 10-Day Gauge.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Two Tests Will Throw Light On Extent of Calvin Sand

Seminole, Okla.—Amerada Petroleum Corporation et al's Chase 3, SW NW SE Section 29-9n-6e, a recent completion in the West Seminole pool, produced 17,321 barrels on its 10-day potential gauge. Production is coming from Wilcox sand at 4069 to 4098 feet. The company's Chase 5, CNE NE SW Section 29-9n-6e, gauged 2322 barrels in 24 hours on gas lift. Chase 4, CNW SW SE Section 29-9n-6e, south offset to Chase 3, was being plugged to abandon after swabbing five barrels of oil and 240 barrels of water in nine hours from Calvin sand at 2602 to 2622 feet. The hole was lost at 2690 feet due to mechanical difficulties. The rig will be skidded and a new hole sunk to Wilcox sand. The Texas Company was drilling below 2900 feet in Sandlin 4, CNW SE SW Section 29-9n-6e, two locations west of Amerada Petroleum Corporation's Chase 4. Calvin sand was cored from 2639 to 2656 feet with a show of oil and gas in the top and water in the bottom. These two test yield some information regarding the probable extent of Calvin sand production in Greater Seminole. The East Earlsboro area which lies a short distance to the north and northwest is now being developed in that formation and but little is known regarding its extent.

Pure Oil Company set 4¾-inch casing on top of the pay sand at 3682 feet and had 590 barrels of oil and one million gas at 3685 feet in No. 1, NE NE NE SW Section 6-15n-7e, old producer in the county line pool between Lincoln and Creek Counties. The well was originally completed October 18, 1916, producing 12,000,000 cubic feet of gas at 2960 to 3028 feet. Later it was deepened to a sand at 3571 to 3625 feet, where it yielded 14,600,000 cubic feet of gas. Pure Oil Company has announced location for Chapman 1, CSW SW NW Section 5-15n-7e, and for Steel 3, CNW NW SW Section 6-15n-7e. Work on both will start immediately. The company is now laying seven miles of four-inch line to tie the pool in with its station at Glenn Pool.

Stanolind Oil & Gas Company was running tubing and will pump Allen 1, CNW SE NE Section 32-5n-5e, in the southern portion of the Bebee pool, northern Pontotoc County. The well was originally completed August 19, 1930, yielding 20 barrels on the swab from sand at 1740 to 1762 feet. Drilling deeper operators found top of the Hunton lime at 2173 feet, and Sylvan shale from 2363 to 2368, the present total depth. The company's Allen 2, NE NE NE Section 32-5n-5e, one location east and two north of Allen 1, had top of the Viola lime at 2415 feet, Simpson dense at 2518 feet, and Simpson dolomite at 2584 to 2598 feet. It was standing with 700 feet of oil in the hole after shooting with 20 quarts at 2550 to 2560 feet and at 2593 to 2598 feet.

Wewoka-Holdenville

Oliphant et al have moved in machine for No. 1-A, SW NW NW Section 14-7n-8e and Peters Petroleum Company has announced location for No. 1, NW NE NW Section 22-7n-8e, both in the Wewoka-Holdenville area of western Hughes County.

Hilton Phillips et al recovered the core barrel and were preparing to drill ahead in Moore 1, CSW SW SE Section 21-7n-4e, in the area between St. Louis and Pearson in southeastern Pottawatomie County. Cromwell sand was logged from 3490 to 3530 feet with a show which yielded 60 barrels in three hours on the swab. The Hunton lime was barren at 3662 to 3705 feet, total depth at the time of losing the core barrel. C. W. James et al had sand apparently the Cromwell at 3538 feet and cored a show of oil at 3542 to 3545 feet, Garrett 1, CSE SE NW, Section 28-7n-4e.

West Konawa

Another one of those things happened in the West Konawa pool last week when Denver Producers & Refiners Corporation attempted drilling the plug in Nye 1, SW SW SW Section 30-6n-5e, after drilling to 3781 feet where they found water and plugged back to 3723 feet. Operators began drilling the plug which apparently became loosened and started rising in the hole due to water pressure which had not been sealed off in plugging back. After tapping the plug back to bottom the water string was recemented and will be ripped for a test at about 2490 feet. Top of the Viola lime was found at 3619 feet.

Oklahoma City Well Proves Rank Among the Big Ones

Oklahoma City. — Phillips Petroleum Company's Brimm 1, SW NE NW NE Section 3-11n-3w, further demonstrated its right to be placed in the big gusher class during the past week when it produced 13,833 barrels in four hours, flowing through two four-inch chokes against 150 pounds back pressure. It also made gas at the gauged rate of 46,500,000 cubic feet. On initial gauge during the preceding week it made 7311 barrels in two hours and twenty-five minutes, flowing under the same conditions. Production is coming from 172 feet of Wilcox sand topped at 6305 feet. The well is located on a 40-acre tract which has yielded not less than 2000 barrels an hour from all completions.

The week also brought a completion which ranks among the best in the southwestern portion of the pool when Slick-Urschel, Incorporated's, Dodd 2, CSW SE SE Section 22-11n-3w, made 2557 barrels in two hours, flowing through a six-inch choke against 150 pounds back pressure. Production is coming from Wilcox sand at 6475 to 6591 feet. It is an irregular west offset to the company's Dodd 1, which was completed during March for an initial production of 5090 barrels in four hours. Phillips Petroleum Company was digging cellar for No. 1, SE NW SE SE Section 22-11n-3w, 825 feet south of the north line and 808 feet west of the east line of the SE¼. It is a northwest diagonal offset to Slick-Urschel's Dodd 1. Showing the variation in initial production which may be found within a few locations in this portion of the pool, Phoenix Petroleum Company's (formerly R. A. Wallace et al) No. 1, SE SW NW SE Section 22-11n-3w, yielded 791

barrels the first hour and was making gas at the rate of 30,000,000 cubic feet. It is less than 1400 feet northwest of Dodd 1, mentioned above.

Grison Oil Company's Little 1, NE NE NE SW Section 22-11n-3w, fourth completion of the week in the southwestern area, was shut in for additional tankage and estimated at 400 barrels per hour from Wilcox sand at 6490 to 6562 feet. Indian Territory Illuminating Oil Company was cleaning out below 6620 feet in Miller 1, CNE NE NW Section 35-11n-3w, which defined the southwest productive limit in the Wilcox sand a few weeks ago. After finding water in that formation the test was plugged back to 6651 feet and shot with 40 quarts. Going back into the hole operators found a bridge at 6400 feet and have had considerable difficulty in cleaning out. On a recent swabbing test it produced 81 barrels in 22 hours, production apparently coming from Prue sand at 6603 to 6615 feet.

Los Angeles Petroleum Company's (formerly Argood et al) Levi 1, SW NW NW SE Section 15-11n-3w, an area which has shown but little promise, produced 781 barrels in one hour from Wilcox sand at 6390 to 6491 feet.

Northern Part of Field

In the northern portion of the pool where only a relatively few operations remain, Slick-Urschel, Incorporated, completed Classen-Edwards 17, CNW SE SW Section 3-11n-3w, flowing 3341 barrels the first five hours with only 19,000,000 cubic feet of gas. Wilcox sand was reported from 6372 to 6511 feet. The company's Classen-Edwards 18, SE SW NE SW Section 3-11n-3w, north offset to No. 17, put 3166 barrels in the tanks in two hours, flowing through a five-inch choke against 150 pounds back pressure. This is approximately 1583 barrels per hour from a sand penetration of 167 feet as compared with 886 barrels per hour from No. 17 with a penetration of 139 feet. Classen-Edwards 14, SW NW NE SW Section 3-11n-3w, on the same lease, topped Wilcox sand at 6334 feet and was waiting on cement to set on the nine-inch at 6336 feet. Total depth is 6356 feet.

Oklahoma County Test At Interesting Depth

Oklahoma City.—Sinclair-Prairie Oil & Gas Company was drilling below 4300 feet in Kennedy 1, CSE NW Section 4-13n-1w, important wildcat test located approximately two miles south of the town of Arcadia in northeastern Oklahoma County. The only correlation so far announced is top of the Pawhuska lime at 2495 feet, said to be slightly low as compared with Slick and Tidal Oil Company's Martin 1, NWC Section 13-13n-1w, dry in Arbuckle lime at 6971 feet. The Pawhuska lime is a hazardous formation upon which to make long distance correlations since geologists do not agree as to which of the two limestone beds should be considered the top. For that reason no dependable comparison can be made until correlations on some of the lower beds are available.

Oklahoma Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BECKHAM COUNTY—		
Consolidated Oil (Allman-Ramsey et al) Marcum 1, c sw sw 22-9n-23w	¶33	2742
CARTER COUNTY—		
Paul Robb, Burton 1, c ne sw ne 31-1s-2w	50	1860
Robb et al, Burton 2, sw sw ne 31-1s-2w	435	2455
COTTON COUNTY—		
Shasta Oil, N. Cory 1, ne sw sw 18-1s-9w	*	2619
CREEK COUNTY—		
Kemp & Nunally, Benson 1, nwc 31-17-7e	*	2984
Windsor et al, G. Bruner (Hinton) 1, se c nw 25-19-8e	35	2388
A. W. Swift, F. Morgan 1-A, nwc 3-19-9e	30	2100
Bryan Petroleum, E. Postoak 1-A, swc se 15-19-9e	35	2754
Irelan et al, Bible 2, c se nw sw 20-19-9e	6	2254
Johnson O&R, Bible 4, ne se sw 20-19-9e	70	2220
Sheridan Oil, Anthis 2, csl nw se 1-16-11e	¶2-8	1908
MUSKOGEE COUNTY—		
Robinson Oil, London 5, cel nw sw 17-13-16e	18	2132
Paul, Caesar 1, ne c se 7-15-18e (owdd)	*	1695
OKLAHOMA COUNTY—		
Phillips Pet. et al, Brimm 1, ne nw ne 3-11-3w	7311	6477
Slick et al, Classen-Edwards 17, nw se sw 3-11-3w	5 hrs ¶19 21,000	6511
Harrell-Davis, Fish 2, ne se se 22-11-3w	4 hrs. ¶72-35,000	6552
Skelly Oil, Moon 1, nw sw ne 22-11-3w	1 hr. ¶6-13,000	6560
OKMULGEE COUNTY—		
Misner, Morris a-A, ne nw nw 21-14-14e	3	912
Home O&G Co., Anderson 1-A, se ne ne ne 2-15-14e	*	798
PONTOTOC COUNTY—		
Superior Oil, Mauldin 6, c se sw nw 32-5n-5e	120	2494
POTTAWATOMIE COUNTY—		
Gypsy Oil, Horn 6, ne c 23-6n-3e	453	3511
SEMINOLE COUNTY—		
Sunbeam, Campbell 1-A, nw nw se 20-9n-6e	*	2716
Amerada et al, Chase 3, sw nw se 29-9-6e	1698	4098
STEPHENS COUNTY—		
W. H. Smith, Ridgeway 1-A, nw ne se 17-3s-4w	*	1802
TULSA COUNTY—		
Murray et al, J. G. Bilby 1, cwl nw se 21-19-14e	*	1100
WAGONER COUNTY—		
Sheridan Oil, Snake 3, c se nw 26-18-15e	70	1071

New Operations

CARTER COUNTY—Shasta Oil, 1, c sw ne sw 25-4s-6w.

CREEK COUNTY—O. O. Owens et al, S. Hope 1, nwc 23-15-7e. Correction—Billingslea, Wayman "C" 3, nw sw nw 22-15-8e, formerly reported as No. 6. Pioneer Petroleum, Abraham 1-A, c nw nw se 27-16-9e. Correction—T. E. Mann, Coonrod 2, se c 18-19-9e, formerly reported as No. 1-A. Doke & Hughes, J. Boyd 1-A, se c ne 30-19-9e.

HUGHES COUNTY—Pringle & Marshall, Rogers 1, c se ne se 8-7n-8e.

OKLAHOMA COUNTY — Mid - Texas, Vaughan 2, se sw ne 15-11-3w. Phillips Pet. Devore 1, ne se se 22-11-3w. Phillips, Kobout 1, nw ne se 22-11-3w.

OKMULGEE COUNTY — Misner, Norris 3A, ne c nw nw 21-14-14e.

POTTAWATOMIE COUNTY—Smith et al, Brandenburg 1, nw se nw 9-7n-4e. Smith et al, Hawkins 1, c se sw nw 10-7-4e.

SEMINOLE COUNTY—Carter Oil, Campbell 7, ne c sw 20-9n-6e. Phillips Pet., Fixeco 5, (twin), se sw nw 20-9-6e. Sunbeam Oil, Campbell 1-A, nwc se 20-9n-6e. Oils, Inc., Marks 1-A, nwc ne 32-10-6e.

Wildcat Drilling Report

(Wells shut down not included)

OSAGE COUNTY—Mohawk Oil, 1, ne c 10-26-9e, S. 1575-1633 ft, shot 120 qts, swb 15 bbls 1st 24 hrs, then exhausted, pumping 100 per cent water, sd.

KAY COUNTY—Blubaugh et al, Indian 1, c nw ne 30-25-1e, sand 2556-63 ft, drilled plugs, est. 5M gas, recementing 5 inch.

ELLIS COUNTY—Algers Pet. Co., Roper 1, c se nw, 21-20-24w, rotary rig.

NOBLE COUNTY—Wentz Oil Corp., et al, Wolff 1, c se nw 17-20-2w, sh 3452-3505 ft, dr 4094 ft in broken sand and shale.

BLAINE COUNTY—Watonga Pet., Masters 1, sw nw nw, 27-16-11w, dr 350 ft.

OKLAHOMA COUNTY — Sinclair-Prairie, Kennedy 1, c se nw 4-13-1w, 15 inch 302 ft, dr 3370 ft.

LINCOLN COUNTY — Sovereign et al, Flower 1, sw se se, 14-12-3e, lcn.

BECKHAM COUNTY—Pattee Royalty Co., Goose Tree 1, sw se sw se 32-10-23w, dr 475 ft.

WASHITA COUNTY—Miley Petroleum Co., Montgomery 1, sw nw se nw, 23-9-17w, dr 20 ft. Burns & Prince, Dock 1, swc, 31-8-18w, sdy sh 2080-90 ft, so, td 2160 ft, sd.

SEMINOLE COUNTY — Hudspeth et al, Harrod 1, sw ne, 3-8-8e, rog. Donley et al, Shepard 1-B, se ne, 4-8-8e, td 820 ft, repairing rig.

PITTSBURG COUNTY — Moffett & Hall, Jones 1, c ne nw, 14-8-14e, S. 321-81 ft, G. S. O, S. 1448-55 ft, dry, td 1675 ft, fsh tools. Tate Oil, Fulton 1, se c, 34-7-14e, (owdd) Hartshorn S 2910-75 ft, fsh bailer.

PONTOTOC COUNTY — Blackwell O&G, Abbott 1, nw sw ne, 14-4-6e, rig. Sunray, Grant 1, c se ne, 11-4-8e, 8-inch 932 ft, td 1550 ft, pulled 5 inch, run 6 inch.

GRADY COUNTY—English Drlg. Co., Heenan-Coe 1, ne se ne, 32-3-7w, cored sand 3255-87 ft, td, SO&G, moving in pipe.

PONTOTOC COUNTY—Williams, Kroth 1, ne se, 33-3-4e, moving in rig. Edna-Marie Oil, McWhirt 1, ne se, 11-2n-6e, Hunton 191 ft, Sylvan 500 ft, td 510 ft, ur 5 inch.

COAL COUNTY—Fink & Russell, Miller 1-A, se ne, 10-2n-8e (owdd) td 2395 ft, rng 5 inch.

ATOKA COUNTY—Winhan et al, Redwin 1, se sw sw 23-1-14e, dr 135 ft. Hicks et al, Morris 1, ne nw se, 5-1-15e, dr 285 ft. Willis et al, Roland 1, nw ne se 6-1-15e, dr 900 ft. Newman, Bassett 1, c nw, 18-1-15e, dr 165 ft.

McCURTAIN COUNTY — Stampfs et al, Harris 1-A, sw nw sw 14-9s-25e, td 2778 ft, sd. Prasell et al, Wagnor 1, se ne, 5-8s-27e, dr 1009 ft.

MARSHALL COUNTY — J. T. Hogan, Thompson 1, ne nw ne, 26-7s-6e, lcn. Hughes Ayres 1, ne se 30-7s-7e, dr 740 ft.

JEFFERSON COUNTY—E. S. Bonner, Burgess 1, ne se 12-5s-8w, dr 750 ft.

ATOKA COUNTY—Brookshire et al, Guinn 1, nwc 18-3s-10e, dr 2540 ft in Woodford.

STEPHENS COUNTY — Gillette Bros., Cooley 1-A, nw se nw, 17-2s-8 west, rig.

ATOKA COUNTY—Morris et al, Ray 1, 8-2s-12e, ne nw ne, td 610 ft, sd.

COAL COUNTY—Radial Oil, Richardson 1, ne nw 2-1s-8e, td 1450 ft ru.

ATOKA COUNTY—Croxton, E. B., Mason 2, nw nw nw nw 2-1s-14e, dr 105 ft.

EAST CENTRAL TEXAS

Modification of Proration Rules Would Limit Further Drilling; Allowable Now Brings Well Earnings Low.

H. H. KING, *Staff Representative, Fort Worth, Texas*

Revival of Drilling Expected Unless Proration Scheme Changed

Tyler, Texas.—A rebound on the drilling slump that has prevailed in the East Texas oil field for some weeks is threatened since all members of the Texas Railroad Commission have virtually pledged their support to retaining the present plan of proration. Continuation of the well allowable plan affords the owners of the most wells the largest share of the outlet regardless of volume of acreage held or structural position.

A combination acreage and well allowable plan has been proposed as a remedy against unnecessary drilling. Field work had been curbed by many companies and operators in expectation of the withdrawal of a production premium on continued drilling.

Some of the larger interests are taking steps to resume a fairly active drilling program in order to uphold their percentage of the total production to an equal level with their percentage of total producing acreage in the field. Another factor encouraging new drilling is the rumor that the commission will shortly end its bi-monthly cuts in the well allowable, and order the output of the field increased to offset new wells. The expected market outlet increased would come through cutting allowables in other flush fields.

Prospective pumpers appeared in greater numbers in the latest weekly completion list for the East Texas oil field as result of poor sand conditions and decline in reservoir pressure on edge leases. On the north end of the field in Upshur County, The Texas Company's Jim Williams 1, located in northeast corner of 93-acre lease, J. Crouch Survey, flowed by heads via open tubing for three hours and quit after penetrating two feet of sand to a total depth of 3683 feet, or 3321 feet below sea level. The north offset made a larger producer from the same sub-sea depth. More sand may be taken in Williams 1 to try for a regular flow of oil.

Shell Petroleum Corporation's C. C. Landers 12, located in the northwest part of the G. W. Hooper Survey, failed to flow when washed via combination of one- and 1¼-inch tubing at a total depth of 3759 feet. Other wells in this area have been shy on flush production. In the southeast part of the Wm. King Survey, Upshur County, the Service Drilling & Royalties Corporation's J. W. Free 3, located in northeast corner of 30-acre lease farmed out by Humble Oil & Refining Company, flowed 55 barrels in 12 hours via taper tubing from three feet of sand, with the hole bottomed at 3681 feet, or 3325 feet below sea level. This well is credited with making 34 per cent b.s. & w. Humble Oil & Refining Company's May Mattox 3, located in northeast corner of 61.6-acre lease, Juan Pineda Survey, Upshur County, flowed by heads for five hours via choke on tubing then quit. It logged sand and shale at 3635-3681 feet, placing the bottom of the hole at a sub-sea depth of 3306 feet.

Simms Oil Company and Frank Buttram's W. R. Nicholson 7, which was reported to have gone dead early this month after flowing its allowable for six weeks from sand at 3717-19 feet, avoided deepening with cable tools by resuming its flow when a bridge was washed out below the casing seat. The well flowed 60 barrels oil per hour via open 2½-inch tubing when the bridge was removed. It has a closed in pressure of 250 pounds.

Preliminary production test given Sinclair Prairie Oil Company's A. A. King 1-C, located on the west line of the E. H. Angel Survey and west of the Sabine River, rated it at one barrel of oil per hour on swab from broken sand at 3407-3460 feet. This non-flowing well is on the east edge of the field in Gregg County. Solar Exploration Company's third completion on the J. S. & Frank Elder 16-acre lease, located northeast of town of Kilgore, responded to kick-off with Halliburton's air wagon with a natural flow of 12 barrels of oil per hour from sand at 3516-37 feet, with the hole bottomed in shale at 3560 feet. This is the third midget well on the lease, all wells having cemented three-inch casing on the sand, then produced via taper tubing. Low pressure in this area is causing some of the wells to cease flow, but they usually are revived upon the introduction of compressed air.

Tidal Oil Company's J. E. Choice 1, located on the west edge of the Kilgore area, Gregg County, has been placed on the pump, using standard rig, and is rated good for 80 barrels daily. It is showing five per cent cut oil, having made water for a number of months prior to going dead. Sun Oil Company's Ed. W. Barker 2, located on west edge of the Kilgore area, Rusk County, is preparing to install a jack to be ready to pump with a rod line extending over from Barker 1, which was prematurely equipped with a motor driven Lufkin unit. Barker 2 was completed July 22 making pipe line oil under choke at a sub-sea depth of 3321 feet, but promptly developed four per cent b.s.&w. It has increased to 20 per cent lately, thus heralding the passing of the flowing life of the well. Barker 1 is making its allowable along with two to 20 per cent b.s.&w., but the percentage of cut oil has remained about normal for more than a year.

Vernon Howze and Wilder's J. Reddic 2, located in southeast corner of 16-acre lease, Thos. Grace Survey, flowed by heads at rate of 45 barrels oil per hour upon completion in broken sand at 3634-72 feet. It is on the east flank of the field in Rusk County, and on a lease sold by Kirby Petroleum Company. In the Overton townsite area, which has been badly hit by the spread of salt water in the sand, A. M. Sutton et al's W. B. Brandon 1 pumped 100 barrels fluid, including 60 per cent b.s.&w. during 24-hour gauge from sand at 3889-90 feet. It has a sub-sea depth of 3336 feet.

J. F. Anderson et al's second pumper on the E. B. Alford lease, I. G. Parker Survey, Joiner area, was completed making 44 barrels of oil in 10 hours from broken sand at 3535-3704 feet. Most of the nearby wells are also on the pump.

Production in the northeast corner of Cherokee County was terminated sharply when Merry Bros. & V. C. Perini, Jr. et al's A. Kelly 2, a south offset to a normal producer, tested salt water and no oil in sand at 3685-3686 feet, or 3332 feet below sea level.

Commission Has No Power to Stop Night Trucks

Austin, Texas.—In an informal opinion to the Texas Railroad Commission Thursday, Fred Upchurch, assistant attorney general, stated that the commission has no power to prevent the operation at night of oil trucks in the East Texas oil fields.

The commission had contemplated taking this action with the view of reducing possibilities of excessive oil runs from the field.

Upchurch stated that there was no more power to take this action, than to close in the wells and prevent oil going through the pipe lines during other than daylight hours.

Further Reduction of Allowable Prolongs East Texas Payout Period

Tyler, Texas.—Under the 43-barrel daily well allowable ordered enforced in the East Texas oil field by the Texas Railroad Commission beginning 7 a.m., August 16, the gross earning power of a well observing proration and receiving the posted price is $42.14 daily. Deducting the usual one-eighth royalty interest the gross is $36.87 daily. This rate of revenue will require approximately one year to return the average cost of a completed producer, which now range in cost close to $12,000 equipped to flow into tanks. A reduction of only one barrel was made in the well allowable for the August 16 to September 1 period, but it is quite probable that more cuts in the allowable are in store for the field, with possibilities of a 40-barrel quota being in effect 30 days hence.

Constant shrinkage in the well allowable in this field in order to restrict its legally produced oil to about 325,000 barrels daily has been necessary to offset completions. The rate of new completions has lately dropped to an average of 18 daily, and decreased field work assures a healthy reduction in this daily average over the balance of the year. This change in the status of drilling is most timely, as there are many independent property owners in the field that can not meet their financial obligations should their monthly revenue from completed wells be subjected to continued reductions.

A critical period is approaching in this field. It has to do with the proposed changing of the proration plan to a combination acreage-well allowable basis, and the matter of upholding the 98 cent posted price yet take care of new completions seeking market relief. A change in the proration plan is proposed to kill the incentive to continue a limited volume of drilling as long as the flowing production exists. Hundreds of operators and companies that purposely concentrated on small drilling sites because of the advantage enjoyed under such a small lease investment with the well allowable in effect are certain to oppose the dropping of the straight well allowable.

The question of servicing new wells and retain the prevailing price is likewise a disturbing matter. Companies paying the posted price for oil are becoming more reluctant to make new connections even though the expenditure of hooking up lease tanks with pipe lines are now generally borne in full by operator benefited by the market outlet. A shrinkage in buying of outside crude by leading purchasers, generally, has taken place, as the field's allowable has remained almost constant at about 325,000 barrels daily on legally produced oil for months, yet connections are more difficult to obtain than ever.

Failure of well owners to line up a pipe line connection at the posted price leaves the so-called bootleg crude buyer as the only alternative. The giving of a well connection to purchasers seeking less than posted price crude usually involves a price ranging from 35 to 60 cents per barrel, but in many instances opportunity is provided by such buyers to run more than the legal amount from a well. Such an arrangement increases the supply of cheap crude reaching the market, and if not soon checked in its present rate of increase will be the cause of a collapse in the price structure. Purchasers adhering to the posted price are opposed to accumulating a surplus stock of oil under the present schedule.

Property owners in the East Texas field that completed their wells shortly after the adoption of the well allowable basis of proration last September 5 have enjoyed an attractive return on their investment to date. Wells on production and operated in accordance with proration should have an accumulated gross production of 40,575 barrels between September 5 and August 16, with nine days deducted for Sunday observance in the field. Calculated on a basis of the posted price of Magnolia Petroleum Company, this oil yielded $26,466.22, or $23,157.94 with the one-eighth royalty deducted. However, usual deductions by pipe line companies, taxes, lifting costs, etc., are not included in the above figures.

Until recently an investment in favorably located properties in the East Texas field has yielded a very attractive return, and values have remained firm, with a tendency to stiffen, since last September when proration became generally in effect. A let down on enforcement has occurred lately, but is largely due to state elections, and almost complete withdrawal of the National Guard from proration duty because of exhaustion of funds available for maintaining the troops in numbers.

Vandals Cause Tightening Of Watch on Properties

Tyler, Texas.—Guarding of producing properties in the East Texas oil field has become more general since the blasting of connections from Humble Oil & Refining Company's Mary Killingsworth 3, located in the north portion of the field, on the night of August 20. A small fire had been started by the vandals at the well prior to setting off explosives, which caused the well to flow wild. The concussion extinguished the flames. The well was placed under control on the following day.

Repeated oil thefts under the cover of darkness by tank truck drivers, and opening of valves on shut-in wells has made it necessary for many companies to have watchmen patrol their properties.

Earning Power of a Well in East Texas Oil Field

Date of proration changes, well allowable, accumulated production and revenue earned, based on posted price of Magnolia Petroleum Company, sustained by a single well operated normally in the East Texas field since the adoption of the well basis coincident with the advent of military enforcement are shown below:

Proration period from 7 a.m. to 7 a.m.	Daily allowance per well	Total days	Accumulated production	Gross value	Gross revenue for ⅞ interest
Sept. 5—Sept. 21	225	16	3,600	$2,448.00	$2,142.00
Sept. 21—Oct. 13	185	22	4,070	2,767.60	2,421.65
Oct. 13—Oct. 29	165	16	2,640	1,795.20	1,570.80
Oct. 29—Nov. 7	150	9	1,350	1,030.50	901.69
Nov. 7—Dec. 11	125	34	4,250	3,527.50	3,086.56
Dec. 11—Feb. 5	100	49*	4,900	4,067.00	3,558.62
Feb. 5—March 16	75	38**	2,850	2,365.50	2,069.81
March 16—April 1	72	16	1,152	956.16	836.64
April 1—April 16	71	15	1,065	1,043.70	913.24
April 16—May 1	67	15***	1,005	984.90	861.79
May 1—May 16	61	15	915	896.70	784.61
May 16—June 1	59	16	944	925.12	809.48
June 1—June 16	54	15	810	793.80	694.58
June 16—July 1	51	15	765	749.70	655.90
July 1—July 19	50	18	900	882.00	771.75
July 19—Aug. 1	46	13	598	586.04	512.79
Aug. 1—Aug. 16	44	15	660	646.80	565.95
Aug. 16—Sept. 1	43	..	...	.....	.....
Total		337	40,574	$26,466.22	$23,157.94

*Deduction made for seven days account Sunday holidays on production.
**Deductions made for two days account Sunday holidays on production.
***Beginning April 18 most major companies used 62 bbls. allowable for period.
Note—No allowance made for fixed deductions by pipe line companies, ranging from one to three per cent, from gross production.

Central East Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
JOINER AREA—		
J. F. Anderson et al, E. B. Alford 2	300	3704
Arrow Drl. Co., London Methodist Church 1	8000	3803
Aston Oil Co., J. R. Alford (47-ac) 5	6500	3715
Cypress Oil Corp., R. A. Motley (5-ac) 1	3000	3731
R. H. Dearing (Royal Pet. Corp.), T. H. Goforth (40-ac) 2	2000	3819
Deep Rock Oil Co.-Amerada Pet. Corp., Stovall 13	4500	3716
Everts Drl. Co., J. Cole 5	7000	3704
The Falcon Co., A. K. Perkins (77-ac) 6	8500	3617
Florence Oil Co., R. A. Motley (25-ac) 2	7200	3722
Gulf Prod. Co., A. H. Rayford (59-ac) 4	9000	3809
A. H. Rayford (29-ac) 4-A	4500	3802
J. W. Shaw (89-ac) 4	8500	3788
H. E. Hale et al, S. M. Clay (75-ac) 3	3500	3672
J. W. Hooser (H. W. Whisenant, Rec.) G. W. Eaton (10-ac) 2-C.	4000	3815
Humble O&R Co., John Bell (92-ac) 4	11,000	3826
Jessie White (43-ac) 2	9000	3682
H. L. Hunt Prod. Co., V. E. Reid (120-ac) 5	1500	3686
Oscar Kemp & B. Fisher, Williams (2-ac) 1	*	3870
Lion Oil Ref. Co., H. Brooks 9-B	4000	3720
Merry Bros. & Perini, A. Kelly (90-ac) 2	*	3686
Mid-Kansas O&G Co., H. Clay (130-ac) 4	1000	3690
M. M. Cross 34	7500	3651
W. T. Grissom (842-ac) 16	7200	3633
W. T. Grissom (842-ac) 19	9500	3649
D. Ledbetter (212-ac) 8	7800	3672
S. H. Moore (193-ac) 8	10,000	3692
J. M. Price (55-ac) 5	6000	3685
M. A. Price (201-ac) 7	5500	3638
J. H. Sharpe (482.67-ac) 14	10,000	3674
J. W. Robbins, Rec. (Owenwood Pool No. 3), C. W. Mullins (30-ac) 4	10,500	3785
J. Curtis Sandfer et al, J. B. Irwin (3½-ac) 1	5000	3773
Sinclair Prairie Oil Co., Allen Kersh (155-ac) 6	7000	3639
J. B. "Bunch" Wilson (65-ac) 8.	6500	3785
Smith-Guerin & King, Cook (20-ac) 3	9000	3699
Stanolind O&G Co., T. O. Mason (107.2-ac) 6	7200	3621
Stanolind-Pure Oil Co., R. A. Moores (251-ac) 12	7500	3620
Sun Oil Co., J. D. Henson (216-ac) 10	8000	3666
A. M. Sutton et al, W. B. Brandon 1	40	3890
The Texas Co., First State Bank (160-ac) 9	10,500	3748
L. J. Pinkston (80-ac) 8	5500	3693
Uscan Oil Co., Giles 1	3000	3745
KILGORE AREA—		
Adams & Lyles, L. Howard (49-ac) 4	9000	3580
Arkansas Fuel Oil Co., M. B. Hughey-Ross (220-ac) 8	7000	3555
British-American Oil Prod. Co., W. A. Ector (11½-ac) 3	6500	3664
J. E. Crosbie, Inc., E. Camp-Leach (51-ac) 1	10	3598
Devonian Oil Co.-Gulf Prod. Co., R. A. Motley (442-ac) 15	4500	3757
Gulf Prod. Co., H. C. Alexander (209-ac) 15	9500	3546
G. W. Culver (244-ac) 12	8500	3519
G. W. Longley (20-ac) 1	4000	3602
R. H. Still (189-ac) 8	7000	3609
C. Strong (137.3-ac) 8	9000	3715
Howze & Wilder, J. Reddic-Kirby (16-ac) 2	1000	3672
Humble O&R Co., Ben Peterson (50-ac) 2	6200	3562
J. C. Hurley et al, M. B. Hughey 1, blk. 171	1500	3546
M. J. Munn et al, I&GN Ry. 4	8500	3622
Geo. Pace et al, J. R. Irion (24-ac) 2	8000	3811
Max Rubin & Nadel, D. Wills-Shell (85-ac) 1	7200	3657
Selby O&G Co.-Lewis Prod. Co., M. T. Cole (80-ac) 7	7000	3564
Shell Pet. Corp., J. S. Elder 4-B.	9500	3573
B. F. Laird (211-ac) 6-A	11,500	3613
B. F. Laird (54-ac) 2-B	10,000	3621
W. P. Moore 11	9000	3714
Sinclair Prairie Oil Co., A. A. King (337-ac) 19-B, Tract 1	6000	3465
J. E. Lawther (317-ac) 8	300	3569
Solar Exploration Co., J. S. & F. Elder (16-ac) 3	4500	3560
J. B. Sowell et al, Mrs. E. L. Walker-Luse (34-ac) 2	8500	3568
Sun Oil Co., Calvin Brown (100-ac) 6	8500	3670
Sun & Texas Seaboard Oil Co., J. N. Campbell (107-ac) 3	9000	3557
M. T. Cole (264-ac) 7	11,500	3565
Turman Oil Co., W. P. Brightwell (34½-ac) 5-A	11,000	3612
West Florida Oil Co., A. Givens (5-ac) 2	3500	3644
LONGVIEW AREA—		
Amerada Pet. Corp., L. R. Hearne (108-ac) 8	8500	3510
Arkansas Fuel Oil Co., W. T. Burnside (209-ac) 7	12,000	3511
W. T. Burnside (209-ac) 8	11,500	3510
T. W. Lee (52.1-ac) 5-A	10,000	3547
J. C. McKinley (23-ac) 1-D	9600	3634
Thad Snoddy (51-ac) 5	5500	3587
Atlantic Oil Prod Co., Ethel Burnside (204-ac) 13-A	9600	3536
Ethel Burnside (204-ac) 15-A.	10,000	3540
W. T. Burnside (231-ac) 11-B.	11,000	3521
W. T. Burnside (231-ac) 13-B.	10,000	3523
W. T. Burnside (231-ac) 15-B.	10,500	3521
J. J. Fuller (49-ac) 5	7500	3711
J. C. Judge (520-ac) 11	12,000	3530
J. C. Judge (520-ac) 13	10,000	3522
P. McGeorge (40-ac) 1	9600	3535
J. M. Moore (456-ac) 22	11,000	3531
H. W. Moyers (128-ac) 11	8500	3654
Jas. Wilson (100-ac) 6	9500	3630
Atlantic-Sun Oil Co., M. Hays (448-ac) 18	11,000	3540
M. Hays (448-ac) 19	12,000	3540
M. Hays (448-ac) 23	10,500	3557
Ausley & Massengill, Harris-Walker (23-ac) 3	10,000	3569
L. C. Collins et al, C. Fisher-Shell (133-ac) 1	2500	3468
Conservative Oil Co., O. M. Victory (100-ac) 3	8500	3682
Cranfill-Reynolds Co., et al, L. Graves (119-ac) 2	12,000	3661
R. C. Barnswell (50-ac) 4-B	11,000	3530
East Texas Oil Ref. Co., Roy Christian 4	10,000	3690
Empire Gas & Fuel Co., A. Green (67-ac) 6	9000	3654
T. W. Lee (187-ac) 11	10,000	3555
Feazel & Davenport, W. M. Phillips (71-ac) 3	8400	3642
F. & M. Drl. Co., W. L. Blackstock-Moser (20-ac) 2	10,500	3610
P. B. Goodman et al, (was Lee Bros. & Phillips), I. Hohnson 2.	8000	3618
Gulf Prod. Co., A. V. Bacle (69-ac) 9	8500	3609
J. C. Judge (518-ac) 11	9000	3521
J. C. Judge (518-ac) 21	9500	3524
J. C. Judge (518-ac) 23	10,000	3543
J. C. Judge (518-ac) 24	9600	3533
Harry Hanbury et al, T. L. Bray (16-ac) 4	7000	3656
Hawkeye Pet. Corp., H. Fenton (13-ac) 2	8500	3641
H. B. & W. Oil Co., J. C. Gray-Bramlett (23.8-ac) 4	4000	3618
Humble O&R Co., May Mattox (61.55-ac) 3	2500	3681
C. A. Lester & Duffield, L. Graves-Shell (66-ac) 1	11,000	3640
Joe Long & J. C. Robbins, East Primitive Baptist Ch. (1-ac) 1	9600	3755
Joe Manziel et al, Pat Thompson 1, blk. 13	8000	3623
Mar-La-Fay Oil Corp., H. P. Phillips 1	7200	3667
Midas Oil Co., A. V. Bacle (21-ac) 6	9200	3642
Navarro Oil Co., T. B. Harris (80-ac) 5	10,000	3539
Peckham Oil Co., J. B. Webb (20-ac) 2-B	6500	3680
T. Wells (40-ac) 5	7500	3711
Pilot Oil Co., J. C. Bumpass (25-ac) 3	15,000	3514
Rancho Oil Co., M. Fenn (7½-ac) 2	8000	3635
Regent Oil Co., Sue St. John 1	9000	3665
Rio Oil Corp., Lanie Graves (106-ac) 4	8000	3627
Selby O&G Co., Snavely (361-ac) 9-B	8400	3571
Service Drl. & Royalties Corp., J. W. Free-Humble (30-ac) 3	50	3681
Shell Pet. Corp., S. C. Fishburn (100-ac) 6	12,000	3548
A. N. & V. King (160-ac) 5	8500	3587
J. Moore (350-ac) 16	9000	3566
Lewis Sikes et al, F. E. Stancil (32-ac) 4	7000	3700
Simms Oil Co.-Frank Buttram, Nicholson (800-ac) 11	5500	3648
Sinclair Prairie Oil Co., I. Isley (100-ac) 8	9600	3520
Mary Lawson (46¾-ac) 8	11,000	3538
M. Moncrief (252-ac) 22	10,000	3585
J. R. Williams (82-ac) 7	9500	3542
J. R. Williams (82-ac) 8	9000	3557
E. L. Smith Oil Co., C. L. Taylor (25-ac) 5-B	9600	3566
C. L. Taylor (25-ac) 6-B	9500	3585
Stoddard et al, Anderson 1	10,000	3535
Sun Oil Co., D. G. Sparks (50-ac) 3	3000	3671
Mose Thomas (79-ac) 4	9500	3539
Sun-Texas Seaboard Oil Co., J. M. Haynes (202-ac) 12	7500	3628
J. Rollins (87-ac) 6	11,000	3575
The Texas Co., T. W. Lee (210-ac) 4	9000	3555
J. Waddell (26½-ac) 3	7000	3693
Jim Williams (93-ac) 1	500	3683
Tidal Oil Co., Arch Davis (130-ac) 10	14,000	3528
W. Christian (47.3-ac) 3	8000	3594
E. M. Nettleton 5, Tract 2	7000	3542
Twin Oil Co., M. Bonner (148-ac) 4	7000	3652
Yount Lee Oil Co., F. K. Lathrop (114.8-ac) 5-C	9600	3607
S. G. Smith (60-ac) 4-A	10,000	3581
Julia Snoddy (51-ac) 3-B	9000	3608
J. Stephens (57½-ac) 4	10,000	3560
J. F. Stuckey (80-ac) 5	11,000	3532
J. F. Stuckey (80-ac) 6	9500	3561

Wildcat Drilling Report

(Wells shut down not included)

ANDERSON COUNTY—Jack W. Frazier & Campbell Drlg. Co. et al's H. L. Hudson (198-ac) 1, M. Rionda sur, dk. W. H. "Bill" Roeser et al's M. A. Davey 1, P. G. Adams sur, dk.

BOWIE COUNTY—Roy E. Anderson et al's A. Y. Breckenridge 1, M. Dykes sur, elev 352 ft, top Nacatosh sand 775 ft, top Pecan chalk 1180 ft, dr 1265 ft. Joe M. Burnham-C. W. Robinson & John Greer's F. O. Weiss (949-ac) 1, J. Dean sur, elev 388 ft, anhydrite 2945-3030 ft, sd with trace oil in lower Trinity sand 3717-3723 ft. W. S. Langford et al's W. W. Whybark (100-ac) 1, J. H. Dyer sur, sd for dst with trace oil 2076 ft.

CASS COUNTY—Lapan-Lovejoy et al's S. A. Orr (320-ac) 1, G. W. Morris sur, materials.

CHEROKEE COUNTY — Bridges-Chandler et al's Berryman (300-ac) 1, H. Kimble-Dill sur, sd 1550 ft. Barclay-Taite & Deason's A. T. O'Neal (131-ac) 1, J. M. Procella sur, dk. W. N. Hamilton et al's Dr. P. E. Jones 1, J. D. Hamilton sur, lcn. Pure Oil Co.'s W. P. Nicholson (70-ac) 1, R. Stewart sur, lcn. Wm. A. Stone et al's Mrs. J. I. Perkins (200-ac) 1,

Thos. Stanford sur, dr 2360 ft. Marr Drlg. Co. & Stanolind O&G Co.'s E. W. Green-Casey (100-ac) 1, A. B. Kelker sur, rig. Wilson-Stubbs Oil Corp.'s M. F. Ragsdale (53-ac) 1, J. P. Wolfin sur, dr 3115 ft.

DELTA COUNTY—C. M. Joiner Pet. Corp. et al's J. A. Blackwell 1, H. Dunnetella sur, Woodbine sand, 1935-1950 ft, top Georgetown lime 2030 ft, top Comanchean 2913 ft, dr 3110 ft. J. O. Wheeler-Neuville & Yarbo's Ablovich 1, E. Chick sur, elev 507 ft, Austin chalk 1885-95 ft, dr 3800 ft.

ELLIS COUNTY — Paris Oil Co.'s O. S. Bain (60-ac) 1, R. M. Williamson sur, dr 360 ft. Carl Brooks et al's Anderson 1, E. C. Branch sur, dr 655 ft.

FRANKLIN COUNTY—Franco Oil Co. (J. F. Mills, L. S. Harper & A. P. McGee's) L. S. Harper (118-ac) 1, W. N. Dawson sur, elev 356 ft, top Pecan chalk 1320 ft, set 6⅝ inch cas at 3280 ft, td 3285 ft.

FREESTONE COUNTY—Clyde Creighton & Co.'s W. A. Holley (80-ac) 1, A. B. & M. sur, Abst. 51, dr lime 1350 ft.

HENDERSON COUNTY—B. L. Green et al (was J. M. Rogers') M. H. Gossett (103-ac) 1, L. D. Stover sur A-87, elev 341 ft, top Taylor 1450 ft, top Austin chalk 2347 ft, sd for cas on cap rock 3147 ft. Dr. J. F. Kennon et al's Rowe-Baker 1, J. T. Childress sur, portable rotary. H. H. Myers et al's M. E. Olson (80-ac) 1, Geo. Wilson sur, elev 512 ft, dr 2410 ft.

HILL COUNTY—T. J. Spikes et al's M. H. Davis (55-ac) 1, J. R. Alexander sur, lcn.

HOPKINS COUNTY—Harmony Oil Co. (J. F. Roark's) J. L. Taylor (88-ac) 1, John Polk sur, sd 540 ft. Columbia O&G Co.'s McLeon (70-ac) 1, East D. Holbrook sur, rig.

HUNT COUNTY—W. B. Chandler, B. P. Williamson & Wm. C. McGlothlin's Mrs. A. Walker (2½-ac) 1, J. B. Bowerman sur, elev 541 ft, top Nacatoch 990 ft, Austin chalk 1790-2190 ft, top Woodbine sand 2853 ft, sd in sandy-shale 5163 ft.

KAUFMAN COUNTY—Stanley Darrill et al's S. Pannill (649-ac) 1, A. Cherino sur, sd to test reported show oil in sand 2481-2485 ft.

LEON COUNTY—John P. Sheffler & Allday's W. R. Thompson (197-ac) 1, N. M. Allen sur, dk. Leon County Oil Co. (Claude Kavanaugh's) John Morris (200-ac) 1-A, A. F. McWhorter sur, sd 2539 ft. Penn Oil Co.-Shell Pet. Corp.'s Wm. Phillips (160-ac) 1, E. A. Swayze sur, dk.

LIMESTONE COUNTY—C. M. Joiner Pet. Corp. & Miller Drlg. Co.'s W. Stephenson (54-ac) 1, Geo. Gentry sur, sd 1765 ft.

MORRIS COUNTY — Buchanan-Burkhalter et al's Staggers (65-ac) 1, Forbes & Nelson sur, elev 370 ft, hard Pecan chalk 2526-3020 ft, Austin chalk 3483-3506 ft, sd 3554 ft. C. M. Joiner Pet. Corp. & Harris Drlg. Co.'s C. D. Brown 1, Wm. M. Coffey sur, materials.

RAINS COUNTY—Fred Harris et al's M. A. Markowitz (106-ac) 1, Chas. Despaler sur, materials.

RUSK COUNTY—T. E. Castle et al's R. H. Gary (50-ac) 1, J. Latham sur, top Pecan chalk 2678 ft, dr 3410 ft. G. A. Hathaway et al (was Laster & Miller's) Gray 1, Jas. McClain sur, elev 315 ft, Pecan chalk 2180-2537 ft, top Austin chalk 2980 ft, claim show oil 3150-80 ft, sd 3530 ft in Georgetown lime. John Kegans et al's R. L. Needham 1, J. H. Chambers sur, cem cas 112 ft. R. H. Lemon & A. F. Richardson's Luke Motley-H. Wood (498-ac) 1, J. I. Sanches sur, lcn. Wells & Lassiter (was G. H. Vaughn et al's) L. T. Barton 1, sd in Georgetown 3376-77 ft.

SMITH COUNTY—McRobie et al's C. P. Hamilton (259½-ac) 1, J. Rector sur, dk.

UPSHUR COUNTY—B. L. Watson (was Hill Kinsey) et al's D. J. Smith 1, J. R. Davis sur, sd 1865 ft. H. H. McMurphy & H. M. Harrell's E. A. Cobb (50-ac) 1, Lout sur, rig. Scott & Ashland's H. Doughfrate (128-ac) 1, M. P. del Torres sur, cem cas 101 ft.

VAN ZANDT COUNTY—Daisy O&G Co.'s Mrs. C. A. Browning (100-ac) 1, J. P. Tackett-Bell sur, Pecan chalk 2109-2230 ft, top Austin chalk 3160 ft, sd 3287 ft. B. E. Gamble et al's I. D. Walker (1-ac) 1, J. Walling sur, lcn. C. M. Powell et al's W. E. Price (3¾-ac) 1, John Walding sur, lcn. A. C. Roan et al's W. E. Price (7-ac) 1, John Walling sur, rig.

WOOD COUNTY — DeGenther & F. H. Zeigen et al's M. L. McClain (66-ac) 1, Sam Brooks sur, elev 455 ft, Pecan chalk 2553-2740 ft, dr shale 3110 ft. W. B. Saulsbury et al's T. H. Peterson (320-ac) 1, W. B. McNutt sur A-418, dk. J. T. Miller (was Talko Pet. Corp.'s) C. S. Ross (86-ac) 1, F. L. Smith sur, elev 359 ft, top Pecan chalk 2892 ft, co to deepen 3500 ft. Wood County O&G Co.'s Guy Davis 1, John R. Clute sur, co 2350 ft.

East Texas Border Counties

Wildcat Drilling Report

(Wells shut down not included)

HARRISON COUNTY — Ryan Cons. Pet. Corp., Furrh 1, F. O'Neal sur, sp 12½ cas 181 ft. Great Eastern Oil Co., W. L. Rudd 1, Wm. Steele sur, lcn.

MARION COUNTY—Baunauch Dev. Co., Miller 1, H. Fulgram sur, owdd, td 4120 ft. Starling & Preston, Henderson 1, R. Bennington sur, move in rig.

PANOLA COUNTY—United Prod. Corp., Werner 12, B. C. Jordan sur, ta lime and shale 4821 ft (upper Trinity test).

SHELBY COUNTY—Prairie Creek Crude Co., J. D. Ellington 1, J. Burleson sur, cemtd 8¼ cas 1601 ft. Sedberry et al, Pickering 1, Jane Stoddard sur, sd 2375 ft, shale. Ridgeway & Smith, Polley 1, Domingo Gonzales sur, dr hd chalk 2448 ft. Wray & Dunbar, Hayden 1, D. F. T. Yordt sur, arr deepen, td 2130 ft. General Minerals Corp., Pickering 2, D. S. Haight sur, re-cemtd 12½ cas 210 ft, td 1400 ft. Oil News Pub. Co., Pickering 1, C. H. Patterson sur, owdd, td 1543 ft. K. H. Francis, Jno. Mims 1, Mary Smith sur, dr 1480 ft.

Permits for Texas Wells

BASTROP COUNTY—Parsons & Mayfield, Wichita Falls, J. H. Carroll, 432, 1, A. Mays sur, 3850 ft from w and 330 ft from s line.

BEE COUNTY—Southern Drilling Co., Corpus Christi, Harris, 20, 1, S 13, J. M. Uranga sur, 330 ft from n and e lines of blk. 15. J. S. Smith, Lockhart, Weiss, 40, 1, J. M. Uranga sur, 290 ft from n and 250 ft from w line blk. 1.

BEXAR COUNTY—H. H. Weinert, Seguin, A. J. Gembler, 102, 1, J. Montez sur, 843 ft from ne and 150 ft from nw lines.

BRAZORIA COUNTY—Intercoastal Oil Co., Houston, Wisdom, 840, 10, A. Darst sur, 440 ft from nw and 170 ft from sw line.

BROWN COUNTY—R. W. Potter, Rising Star, R. Hickman, 40, 1, Kinsey sur, 150 ft from n and w lines. Bishop & King, Brownwood, Shelton, 5, 12, D. S. Camp sur, 300 ft n of No. 1. Young Bros. & Alexander, Inc., Fort Worth, E. P. Kilgore, 75, 4, B 153, N. B. Mitchell sur, 150 ft from e and 470 ft from s line.

CALLAHAN COUNTY—Matson Drilling Co., Baird, O. E. Radford, 240, 9, S 20, D&D Asy. sur, 300 ft w of No. 2.

CHEROKEE COUNTY—M. H. Lovett, Henderson, Assembly of God Ch. 1, 1, M. S. Coy sur, 105 ft from n and w lines.

COLEMAN COUNTY — Mac T. Anderson, Coleman, G. Grouthous, 232, 1, S 16, HT&B sur, 200 ft from n and w lines.

COLORADO COUNTY—C. B. Bunte et al, San Antonio, R. Matuska, 182, 1, J. Hennecke sur, 900 ft from nw and 432 ft from sw line.

DUVAL COUNTY—Clark & Cowden, Duncan, Okla., J. M. Richardson, 351, 1, S 8, 330 ft from e and 3243 ft from s line. Sarnosa Oil Co., San Antonio, A. Weil, 339, 2, S 130, 400 it ne of No. 1. R. B. Byrd, San Antonio, P. T. Wright, 126, 2, S 101, 330 ft from s and w lines. Highland Oil Co., San Antonio, A. Lundvall, 80, 1, S 42, S½ NE¼, 330 ft from s and w lines. Magnolia Pet. Co., Dallas, G. Wendt, 120, 6, J. Poitevent sur, 151 ft e of center of w line. W. P. Luse, et al, San Antonio, E. Riley, 40, 1, S 46, SW¼ NW¼, 330 ft from n and w lines.

EASTLAND COUNTY—T. P. Coal & Oil Co., Fort Worth, Fee, 1116, 9, C. L. Durocher sur, 700 ft nw of No. 8. W. J. Fiensy, Eastland, R. F. Sims, 160, 1, S 30, B 1, H&TC sur, 1250 ft from n and 200 ft from w line ne¼.

FORT BEND COUNTY—Amended location. Texas Co., Houston, R. A. Wolters, 100, 2, S. Kennedy sur, 300 ft from s and e lines.

FRIO COUNTY—Amerada Pet. Corp., San Antonio, Oppenheimer, 1, W. F. Halsel No. 97/7, 1200 ft from n and 200 ft from e line.

GREGG COUNTY—P. T. Bond, Kaufman, O. Prothro, 8, 2, B 5, Jno. Blair sur, 119 ft s of center of n line. Superior Oil Co., Dallas, L. C. Ingram, 162, 12, W. E. Pasteur sur, 960 ft from e and 182 ft from s line. Flemming & Kimbell, Fort Worth, J. Barnes, 30, 4, G. W. Hooper sur, 330 ft from n and w lines. A. N. Landes, Tyler, R. Smith, 60, 1, Slaughter sur, 160 ft from n and w lines. Enterprise Oil Co., Amarillo, W. Holt, 22, 2, Jno. Blair sur, 290 ft from e and 330 ft from s line. J. E. Mabee Co., Arp, H. F. Whitehurst, 60, 1, McKinney-Williams sur, 330 ft from s and w lines. Wm. A. Hudson, Fort Worth, J. W. Akin, 3, 1, W. H. Castleberry sur, 133 ft from n and 281 ft from e line. H. L. Sturm, Ardmore, Okla., T. Hensley, 1/10, 1, Jno. Ruddle sur, center. Russell & Harsh, Memphis, Tenn., H. T. Elder, 1, M. Van Winkle sur, 100 ft w of center of e line, blk. 119. R. Y. Walker, Dallas, Tubbs, 51, 1, D. Sanchez sur, 150 ft from w and 330 ft from s line. Producers Inv. Corp., Dallas, W. N. Crim, 4, 3, M. Van Winkle sur, nw corner. Twinn Oil Co., Longview, M. Bonner, 148, 8, J. McRae sur, 776 ft e of No. 7. Collins, Gray & Wolfe, Tyler, C. Fisher, 133, 2, Jno. Ruddle sur, 330 ft from n and w lines. Superior Oil Co., Dallas, H. Pritchard, B, 40, 2, F. W. Johnson sur, 930 ft from n and 330 ft from e line. Mead Oil Co., Tulsa, Okla., I&GN, 7½, 2, M. Van Winkle sur, ne of No. 1. Barnsdall Oil Co., Tulsa, Okla., J. G. McGrede, 109, 13, D. Sanchez sur, 520 ft from n and 80 ft from w line. Mrs. E. B. Griffin, Longview, Hughey-Ross, 21, 1, Jas. Hilliard sur, 200 ft from n and w lines. Showers & Moncrief, Longview, Mrs. M. O. Shepperd, 21, 3, G. R. Rains sur, 171 ft from n and 1588 ft from e line. C. H. Lyons, Shreveport, La., Mrs. F. R. Richards, 150, 1, M. Van Winkle sur, 277 ft from n and 131 ft from w line. Heyser & Heard, Dallas, Hineman, 45, 5, G. W. Hooper sur, 330 ft from e and 765 ft from s line. V. Sorrel, Longview, Fee, 1½, 1, Wm. Castleberry sur, 112 ft from n and e lines. L. C. Collins, Tyler, M. H. Bivins, 120, 2, W. P. Chisum, 178 ft from n and 330 ft from w line. Deep Rock Oil Co., Tulsa, Okla., H. Pritchard, 110, 8, F. W. Johnson sur, 330 ft from e and 2710 ft from s line. Rhoads Drilling Co., Fort Worth, Tract 5, 84, 2, Johnson sur, w offset to Gulf-Judge No. 2; Tract 4, 63, 2, E. L. Walker sur, w offset to Texas-Cole No. 3; 1, A. Park sur, n offset to Imperator-Southworth No. 1; Tract 7, 56, 1, P. McAnelly sur, s offset to Magnolai-Zeigler No. 3; Tract No. 8, 85, 1, Jno. Keiser sur, n offset to Sinc-Prairie No. 2 King; 2, n offset to Sinc-Prairie No. 3 King; Tract 4, 63, 3, E. L. Walker sur, s offset to Superior-Pritchard No. A3; 4, n offset to Texas-Cole No. 7; Tract 5, 84, 3, T. Johnson sur, w offset to Gulf-Judge No. 10. Barnsdall Oil Co., Tulsa, Okla., Douglas, 138, 8, W. P. Chisum sur, 175 ft from e and 690 ft from s line. P. N. Wiggins, Jr., Tyler, L. Martin, 13, 2, T. Johnson sur, 330 ft from w and 176 ft from s line. Amerada Pet. Corp., Fort Worth, M. Killingsworth, 100, 8, H. Hathaway sur, 330 ft from s & w lines. Hamill & Smith, Houston, M. Hill, 11, 2, Jno. Ruddle sur, 204 ft from e and 100 ft from s line. Porter & Baggett, Gladewater, Gregg Ind. Sch., 1, 1, W. P. Chisum sur, center. Arctic Oil Company, Fort Worth, J. S. King, 1, 1, M. Van Winkle sur, 125 ft from e and 105 ft from s line, blk. 117. E. L. Walker, Gladewater, Fee, 1, 1, M. Dillard sur, 110 ft from e and 175 ft from n line, blk. 64. Nick Barbare, Waskom, J. C. Clayborn, 3, 1, I. Baity sur, center, W. M. Angle, Longview, Jno. Curnegan, 3, 1, I. Baity

sur, center. Reynolds & Kimberlin, Gladewater, Perry Est. 1, 1, H. R. Hokit sur, 75 ft from s and w lines of blk. 112. T. T. Lewis, (Inland Oil Co.), Dallas, M. Fenn, B, 17, 2, D. Ferguson sur, 154 ft from n and 150 ft from w line; 3, 154 ft from s and 150 ft from e line. Gulf Prod. Co., Houston, S. Hilburn, 35, 44, L. B. Outlaw sur, 1410 ft from n and 330 ft from e line. M. O. Shepperd, 335, 19, G. R. Rains sur, 660 ft s of No. 6; 20, 330 ft from n and e lines. W. B. Goyne, 30, 3, J. T. McDaniel sur, 228 ft from n and 330 ft from w line. Atlantic Oil Prod. Co., Dallas, W. P. Duncan, 155, 9, Ferguson sur, 330 ft from n and 1000 ft from e line; 11, 330 ft from s and e lines. J. Bander, 84, 9, Ferguson sur, 330 ft from s and e lines. M. Turner, 162, 12, Wakeland sur, 330 ft from n and e lines. J. C. Judge, 520, 26, Johnson sur, 1650 ft from n and 330 ft from e line; 27, 660 ft s of No. 26. R. C. Barnswell, B, 49, 4, McAnelly sur, 450 ft s of No. 1. S. G. Andrews, A, 110, 7, Hyde sur, 660 ft w of No. 8; 8, 330 ft from s and e lines. T. W. Lee, 112, 8, Ferguson sur, 299 ft from e and 1646 ft from s line. W. Smith, 40, 5, Caruthers sur, 300 ft s of No. 2. Sinclair-Prairie Oil Co., Fort Worth, King, B, 147, 11, Jno.-Keiser sur, 478 ft from w and 27 ft from n line. M. T. Cole, 666, 31, S. Brooks sur, 368 ft from e and 2096 ft from s line of sur. Jno. Elder, 60, 5, Wm. McCurry sur, 381 ft from n and 168 ft from e line; 6, 393 ft s of center of n line. Tidal Oil Co., Kilgore, Lake Devernia, 270, 19, W. G. Painter sur, 450 ft from n and 330 ft from w line; 18, W. H. Hart sur, 330 ft from s and e lines; 17, G. R. Rains sur, 330 ft from s and w lines; 20, W. G. Painter sur, 660 ft w of No. 3. Magnolia Pet. Co., Dallas, M. Goyne, 25, 1, Jno. Blair sur, 330 ft s of center of n line. G. W. Tate, 66, 3, Jno. Ruddle sur, 330 ft from s and e lines. J. Allen, 34, 5, G. W. Hooper sur, 213 ft from n and 330 ft from w line. R. B. Walls, 26, 3, D. Dainwood sur, 1036 ft from n and 278 ft from w line. R. B. White, 81, 9, Jno. Ruddle sur, 200 ft from e and 330 ft from s line. W. E. Jones, 116, 7, D. Sanchez sur, 150 ft from n and e lines. Yount-Lee Oil Co., Beaumont, T. Sneddy, 13, 2, W. H. Castleberry sur, 293 ft from w and 330 ft from s line. H. Snoddy, 13, 2, W. H. Castleberry sur, 293 ft from e and 330 ft from s line. T. M. Whatley, A, 51, 4, Wm. Castleberry sur, 250 ft from n and 330 ft from w line. Shell Pet. Corp., Dallas. A. N. King, 160, 6, G. A. Thompson sur, 208 ft from s and 1030 ft from e line. Humble Oil & Refg. Co., Houston, L. Christian, 36, 4, G. W. Hooper sur, 786 ft from n and 168 ft from e line. M. Wells, 70, 6, M. Irwin sur, 330 ft from n and 1074 ft from e line. Empire Gas & Fuel Co., Gladewater, J. W. Akin, 100, 6, W. H. Castleberry sur, 330 ft from w and 133 ft from s line. T. W. Lee, 187, 13, F. W. Johnson sur, 330 ft from n and 820 ft from w line. Texas Co., Shreveport, La., Jno. Waddell, 27, 4, H. R. Hokit sur, 970 ft from w and 220 ft from s line.

GALVESTON COUNTY — Humble Oil & Refg. Co., Houston, E. V. Rosenkranz, 200, 1, S. White sur, center of N½ of lot 10.

GILLESPIE COUNTY—Rod Le Gra, Inc., Fort Worth, W. H. Stephens, 495, 1, AB&M No. 969 sur, 500 ft from n and w lines.

GLASSCOCK COUNTY—Phillips Pet. Corp., Bartlesville, Okla., T. W. Baker, 80, 1, S 31, B 33, T&P sur, 150 ft from n and 200 ft from e line w½ ne¼.

GUADALUPE COUNTY — Marshall Eskridge, San Antonio, Behring, 10, 1, G. W. Williams sur, 150 ft s of center of n line. H. A. Suttle, San Antonio, O. J. Halm, 331, 1, J. Kent sur, 150 ft from n and 1900 ft from e line.

GRAY COUNTY—S. W. Richardson, Fort Worth, J. E. Wright, 160, 1, S 12, B 3, I&GN sur, 330 ft from s and w lines.

HARDIN COUNTY—Jackson Mineral Co., Beaumont, Hebert, 4, 1, blk. 3, C. L. Jackson sur, 50 ft from n and e lines. Acorn Oil Co., Beaumont, Paraffine, 4, 73, Knight sur, center.

HARRIS COUNTY — Rio Bravo Oil Co., Houston, J. J. Settegast, B, 45, 12, J. Kopman sur, 350 ft from n and 150 ft from w line. Sun Oil Co., Beaumont, R. L. Blaffer, 292, 60, R. Dunman sur, 34 ft from w and 2272 ft from s line; 59, 300 ft w of No. 58. E. L. Bender, 2000, 28, W. B. Adams sur, 350 ft w of No. 27.

HARRISON COUNTY—Gibson & Johnson, Fort Worth, J. M. Furrh, 438, 1, F. O'Neil sur, 1313 ft from e and 418 ft from s line.

HENDERSON COUNTY—Jno. T. Kennon, Dallas, Baker-Rowe, 63, 1, J. T. Childress sur, 1060 ft from n and 160 ft from w line.

HOPKINS COUNTY—K. L. McHenry, Dallas, W. J. McLeod, 85, 1, D. Holbrook sur, 330 ft from s and e lines.

HOWARD COUNTY—Smith & McCaslin, Odessa, D. Roberts, 80, 1, S 128, B 29, W&NW sur, 200 ft from s and e lines of ne¼.

JACK COUNTY—R. J. Brown, Henrietta, S. J. Christian, 100, 4, E. Smith sur, 300 ft n of No. 3.

JIM HOGG COUNTY — Tarver & Tarver, San Antonio, G. Martinez, 478, 1, S 623, 1600 ft from n and 300 ft from e line.

JIM WELLS COUNTY—Larcro Gas & Pet. Co., San Antonio, W. D. Wade, 729, 3, S D. W. H. Bode sur, sw central part of lease.

LEON COUNTY—Shell Pet. Corp., Dallas, Wm. Phillips, 164, 1, E. A. Swayze sur, 1325 ft from e and 1352 ft from s line of survey.

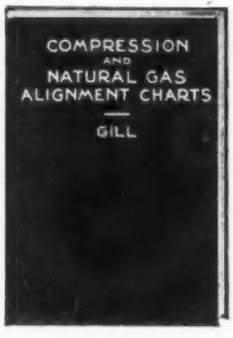
MONTGOMERY COUNTY—Alpha Pet. Co., Houston, South Texas Dev. 25, 1, A. McCown sur, 330 ft from s and e lines. Texas Co., Houston, E. Moody, 473, 1, Ransom House sur, 466 ft from n and 1400 ft from w line. W. T. Caswell, Austin, Fee, 10, 1, G. W. Wager-T&NO No. 4 sur, 392 ft from e and 275 ft from s line. Fee, 10, 1, E. H. Yeiser sur, 286 ft from e and 381 ft from s line.

McMULLEN COUNTY—Jacob, Buzzini & Pickett, Inc., San Antonio, L. Jacob, 800, 5A, S 10, W. H. Jacob sur, 1320 ft s of No. 4A.

RUSK COUNTY—V. H. Ellzey, Longview, Deason, 11, 2, J. Ximinez sur, 246 ft e of center of w line. Hammond Oil Co., Fort Worth, W. P. Keeling, 22, 4, F. Cordova sur, 270 ft from e and 183 ft from s line. Golding-Murchison Oil Co., Dallas, R. W. Fair, 100, 9, M. J. Pru sur, 969 ft from n and 330 ft from e line. Max Rubin, Tyler, W. P. Keeling, 4, 1, F. Cordova sur, 183 ft from n and 270 ft from w line. D. C. Reed, Austin, M. L. Thompson, 1¼, 1, F. Cordova sur, center. C. L. Witherspoon, San Antonio, D. Bradford, 13, 2, J. Ximinez sur, 250 ft from n and 237 ft from e line; 3, 150 ft from s and e lines; 4, 150 ft from w and 151 ft from s line. Aston Oil Co., Overton, J. R. Alford, 46, 7, T. J. Moore sur, 428 ft se of No. 3. Haynes Drilling Co., Shreveport, La., C. Lee, 73, 6, M. J. Pru sur, 41 ft from n and 165 ft from w line. Torrans-Deprong, Jefferson, J. E. Johnson, 60, 1, W. R. Cooke sur, 330 ft from s and e lines. Eysenbach & Jackson, Dallas, W. D. Williamson, 100, 2, Cooke sur, 330 ft from n and e lines. Lewis Prod. Co., Dallas, C. B. Pegues, 40, 6, Geo. Cooper sur, 795 ft from n and 330 ft from e line. F. H. E. Oil Co., Fort Worth, M. L. Thompson, D, 15, 3, F. Cordova sur, 300 ft from w and 150 ft from s line. Kathleen Oil Co., Longview, J. N. Peterson, 16, 4, I. Ruddle sur, 100 ft from n and 200 ft from e line. De Montrond Oil Corp., Tyler, F. L. Pinkston, 24, 4, M. J. Pru sur, 157 ft from e and 37 ft from s line; 5, north of No. 4. Belrice Oil Co., Dallas, C. Young, 40, 1, M. J. Pru sur, 330 ft from s and w lines. Nat Wissman, Tyler, G. W. Wilson, 3½, 2, F. Cordova sur, 70 ft from n and w lines. Navarro Oil Co., Houston, R. N. Brightwell, 113, 9, Y'Barbo sur, 150 ft from n and 221 ft from e line. Sun Oil Co., Dallas, S. A. Selman, 67, 5, M. J. Pru sur, 330 ft from s and e lines. Hunt Prod. Co., Tyler, S. Hale, 91, 3, Jno. Darley sur, 350 ft from e and 990 ft from s line. C. Young, 126, 8, M. J. Pru sur, 330 ft from n and 1410 ft from e line. O. R. Holt, 11, 2, S. P. Hollingsworth sur, 250 ft from w and 260 ft from s line. Mid-Kansas Oil & Gas Co., Shreveport, La., W. T. Grissom, 842, 31, J. C. Woolam sur, 4290 ft from n and 1650 ft from w line; 30, 3630 ft from n and 1750 ft from w line; 29, J. F. Brown sur, 2970 ft from n and 1810 ft from w line; 28, 2310 ft from n and 1820 ft from w line; 27, 1650 ft from n and w lines; 26, 990 ft from n and 1650 ft from w line; 24, J. C. Woolam sur, 491 ft from e and 499 ft from s line. M. M. Cross, 814, 41, J. B. Cadena sur, 750 ft e of No. 15. M. A. Price, 205, 9, J. B. Cadena sur, 660 ft w of No. 4. Gulf Prod. Co., Houston, A. H. Rayford, 60, 3, F. Cordova sur, 330 ft from w and 228 ft from n line. Texas Co., Shreveport, La., J. M. Price, 90, 7, T. M. White sur, 330 ft from n and 361 ft from e line. Humble Oil & Refg. Co., Houston, R. E. L. Silvey, A, 240, 10, T.

COMPRESSION
AND
NATURAL GAS ALIGNMENT CHARTS

By THOMAS T. GILL



The charts in this book have been found useful in solving field problems arising in connection with the measurement, compression and transmission of natural gas, and in the manufacture of natural or casinghead gas. As many of the formulas in common use in natural gas operations are of an impirical nature, with constants that must be evaluated under varying conditions, it will be found that alignment charts are sufficiently accurate for nearly all purposes except for metering large quantities of gas, and here they serve as an excellent check on other calculations. Contains 41 charts, 65 problems. Price $3.50 Postpaid.

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J. Martin sur, 1330 ft from e and 370 ft from s line.

REAGAN COUNTY — Big Lake Oil Co., Texon, University, 640, 8C, S 12, B 2, Univ. sur, 710 ft from s and 2410 ft from e line of sec. University, 640, 9C, S 12, B 2, Univ. sur, 2870 ft from s and 940 ft from e line of sec.

SMITH COUNTY—C. R. Wilson, Arp, J. Cole, 10, 1, Jas. Jordan sur, 130 ft from e and 156 ft from s line. Mundt & Mount, Tyler, A. Murray, 65, 1, Marshall Univ. sur, 330 ft from s and e lines. Golden Eagle Oil Co., Tyler, L. S. Sartain, 5, 1, Jas. Jordan sur, center. C. K. West, Breckenridge, S. S. Cook, 7, 2, Jas. Jordan sur, 158 ft from w and 330 ft from s line. Sun Oil Co., Dallas, Hodnett, 176, 1, M. S. Coy sur, 2310 ft from n and 330 ft from e line. Sinclair Prairie Oil Co., Fort Worth, A. S. Jarvis, C, 256, 15, M. S. Coy sur, 1655 ft from n and 330 ft from w line. Texas Co., Shreveport, La., A. S. Jarvis, B, 115, 5, M. S. Coy sur, 330 ft from n and w lines; 4, 660 ft s of No. 3.

SHACKLEFORD COUNTY—Spencer & Whittekin, Albany, H. Herron, 20, 1, S 9, B 11, T&P sur, 170 ft from e and 450 ft from s line.

STARR COUNTY—W. E. Hooper, Mission, K. Bass, 10, 4, S 6, Por. 75-76-77, 580 ft from s and 150 ft from e line.

THROCKMORTON COUNTY—Toucan Oil Co., Woodson, W. H. Downing, 40, 1, 13, TE&L sur, 919 ft from e and 636 ft from s line. W. H. Downing, 40, 1, 908, TE&L sur, 150 ft from e and 250 ft from s line.

TRAVIS COUNTY—E. A. Fields, Austin, B. H. Bloor, 400, 1, 500 ft from w and 150 ft from s line.

UPSHUR COUNTY — Salome-Cooper Drilling Co., Longview, E. O'Byrne, 301, 4, J. M. Pineda sur, 130 ft from w and 138 ft from s line. Texnia Oil Co., Wichita Falls, J. W. Free, 28, 3, G. W. Hooper sur, 608 ft from e and 330 ft from s line. Simms Oil Co., Dallas, W. R. Nicholson, 800, 12, M. Mann sur, 997 ft from n and 330 ft from e line. H. H. McMurphy, Shreveport, La., E. A. Cobb, 50, 1, Jno. Lout sur, 330 ft from s and e lines. Simms Oil Co., Dallas, J. J. Flewellen, 200, 7, M. Mann sur, 1320 ft from w and 320 ft from s line. Lester & Duffield, Fort Worth, L. Graves, 80, 2, M. Irwin sur, 330 ft from n and 660 ft from e line. Champlin & Bass, Inc., Tyler, E. H. Brawley, 58, 2, McKinney-Williams sur, 280 ft from e and 330 ft from s line. Atlantic Oil Prod. Co., Dallas, D. A. Porter, 109, 9, G. W. Hooper sur, 982 ft from e and 330 ft from s line. Sun Oil Co., Dallas, V. J. Watkins, 42, 3, J. M. Pineda sur, 284 ft from n and 992 ft from e line. Humble Oil & Refg. Co., Houston, J. T. Miller, 99, 6, D. Ferguson sur, 1650 ft from w and 336 ft from s line..

UPTON COUNTY — Crosby Drilling Co., Odessa, J. F. Lane, 40, 2, S 36, B 1, MK&T sur, 330 ft from n and w lines ne¼ sw¼.

WEBB COUNTY — O. W. Killam, Laredo, B. L. Smith, 40, 4, S 1110, 935 ft from e and 490 ft from s line, blk. 12; 2, 590 ft from e and 265 ft from s line, blk. 6. South Texas Oil Co., Laredo, B. Rosenburg, 640, 5, S 271, 260 ft from n and 416 ft from e line, blk. 10. Nordan & Morris, Laredo, Gates, 640, 3, S 116, 2500 ft from e and 3400 ft from s line of sec. South Texas Oil Co., Laredo, B. Rosenburg, 640, 8, S 271, 150 ft from s and 450 ft from e line, blk. 10.

WINKLER COUNTY — S. W. Richardson, Fort Worth, S. Smith, 400, 2, S 94, B A, GMMB&A sur, 330 ft from w and 990 ft from s line n½ sw¼.

WICHITA COUNTY — Rathke Oil Co., Wichita Falls, H. H. Haggard, 30, 1, B 21, DCSL No. 4 sur, 150 ft from s and w lines.

YOUNG COUNTY—Hodges & McLaughlin, Wichita Falls, Stokes, 16, 1, E. G. Rector sur, 500 ft w of center of e line. W. N. Maer, Wichita Falls, R. B. Allison, 40, 1, 26, TE&L sur, 50 ft from w and 150 ft from s line.

ZAPATA COUNTY — Texas Co., Houston, Jennings, 11, C. Blanco sur, 1000 ft n of No. 9. Allied Oil & Gas Co., Laredo, E. Gutierrez, 532, 36, Sh. 4, Comitas sur, 2618 ft from ne and 520 ft from se line. Bryan & Tharp, Laredo, G. Uribe, 40, 1, Sh. 7, Por. 6, B 8, 150 ft from n and w lines. S R & C Oil Corp., San Antonio, E. Trevino, 46, B14, S 65, sw cor of blk. 12. C. B. Polk, Laredo, J. M. G. Martinez, 10, 1, S 434, B 95, 150 ft from s and e lines. Trevino Oil Corp., Laredo, I. G. Trevino, 49, 16A, S 65, B 5, 150 ft from n and e lines.

NORTH and WEST TEXAS

Many Wildcats Seeking Same Oil As Big Lake and One Has Indications of Having It. Deep Well in Young.

H. H. KING, *Staff Representative, Fort Worth, Texas*

Fisher County Test Shows Production in Ordovician

Fort Worth, Texas.—Discovery of oil and gas production below the 6000-foot level in Cranfill-Reynolds Company's J. C. George 1, located amid regular lime producers in Fisher County, is credited to the Ordovician lime horizon, which has made a spectacular performance in the Big Lake field. No estimates have been made as to the production possibilities of this new deep strike on the east edge of the West Texas Permian Basin district, as the drilling crew was carrying a hole full of water from above when oil and gas broke through. A string of three-inch casing has been shipped to the well to try for a water shutoff before testing. Officials of the company have pronounced the producing horizon as being the Ordovician lime, based on paleontological analysis of the formation.

Long Operation

Operations on George 1, which is located in the northeast corner of Section 200, Block 1, B.B.B.&C. Ry. Survey, have been under way for more than a year. The regular Fisher County producing horizon at the 3100-foot level yielded only a small well when tested. This resulted in the company crew being ordered to continue drilling to explore the lower horizons. Series of water sands required the lowering of 5 3/16-inch casing from the 3400-foot level at intervals to about 5000 feet. The top of the Strawn series was logged at 4600 feet, with a surface elevation of 1789 feet. Should a normal thickness of formations prevail the well should be in the Bend lime series, according to geologists familiar with the area, and that a section must be missing, or abbreviated to place the Ordovician at such a high point. The well is credited with having began showing production at 6054 feet, and operations were halted after penetrating two feet. The oil is of a high gravity and amber in color, and gas is free of sulphur. Cranfill-Reynolds Company is one of the largest lease owners in the Fisher County field.

Production from the Ordovician lime is the most sought in West Texas because of its reputation of yielding large oil and gas wells of exceptionally high gravity, while crude produced from the lower section affords a lube oil that compares with the best grades of Pennsylvanian oils.

Ordovician lime production in Texas has been restricted heretofore to the Big Lake field, Reagan County, where 10 completions with no failures have been placed on production at depths ranging from 8500 to 9020 feet. These wells have yielded approximately 15,000,000 barrels of high gravity crude, and are now averaging about 16,000 barrels daily. Water has appeared in seven of these wells, thereby causing the two operating companies to take action toward widening the drainage area by starting three new tests within the past two weeks. Big Lake Oil Company, owner of six deep producers, is drilling below 7980 feet on University 7-C, and is installing rotary on 8-C and 9-C University. Group One Oil Corporation (Continental Oil Company) has the other four producers, and is drilling below 5690 feet on its University 5-B. The latter company is digging cellar for University 6-B, located 400 feet from the east and 725 feet from the north line of the NW Section 36, Block 9. Loffland Brothers Company, Tulsa, has contract to drill the three new tests with rotary equipment on a footage price basis.

Crockett County is receiving a test to the Ordovician lime through 10 companies having unitized a block of 4000 acres, centering on Blocks "O-W" and "U-V," G.C.&S.F. Ry. Surveys. Approximately $300,000 has been expended for leases and royalties within the past year by companies and individuals in general vicinity of this scheduled 7500-foot test. Stanolind Oil & Gas Company, contributor of 40 per cent of the unitized acreage, is in charge of development, and late last week was drilling below 3250 feet on J. S. Todd 1, located near center of NE Section 67, Block "U-V."

Irion County

Irion County has two Ordovician lime tests in progress. M. E. Davis-Beneduin & Trees and Plymouth Oil Company's J. D. Sugg 1 is drilling in hard black shale below 8170 feet. Stanolind Oil & Gas Company's wildcat on the W. H. Williams ranch is drilling in new hole below 6400 feet after losing drill stem at 7414 feet when fire partially destroyed the rotary rig.

A try for production in the Ordovician horizon is the tentative goal of a wildcat test now under way in Cottle County on a block of about 25,000 acres in west central part of the county. Darby Petroleum Company and Merry Bros. & V. C. Perini are drilling this test after extensive geo-

logical preparedness on the Carl Puesel 632-acre tract, Section 40, Block "B," J. H. Stephens Survey. This wildcat was drilling below 2630 feet last week, having reduced hole at 2507 feet. It has a surface elevation of 2010 feet. Three sizes of casing have been set, and the next string will be 10-inch.

A proposed 6000-foot test for Brown County was started August 17 with the spudding of B. David Thomas and W. J. Dobbs' wildcat on the Alvin Richmond 1. The test is located in the northwest corner Block 78, Comanche County School Lands, and about three miles northwest of Blanket. The above operators maintain headquarters in the Tower Petroleum building, Dallas. Their plans are to set 20-inch surface casing, and make the deep test with cable tools.

Young County Well Looks Like Deeper Production

Wichita Falls, Texas.—A bid for a producer from the deep lime horizon in central east portion of Young County has been made by The Texas Company's wildcat on the W. C. Burns tract, which developed 600 feet of oil in the hole from gray lime at 4098-4103 feet and brown lime at 4103-11 feet. A string of 6⅝-inch casing is to be lowered from the 3750-foot level to the top of the oil horizon before attempting a production test. This wildcat is located in the northwest part of section 1986, T. E. & L. Survey, and about two miles northeast of nearest lime production, which includes an oil and gas well in the 3800-3900-foot lime horizon. The Texas Company has an almost solid block of 2050 acres surrounding the above wildcat. Burns 1 logged Gunsight lime at 155-163 feet; top of Palo Pinto lime at 1545 feet; and top of Caddo lime at 4067 feet, with a surface elevation of 1290 feet.

The Texas Company's D. C. Killion 1, a second wildcat for the company in Young County, cased off small oil and gas showings developed from the Strawn horizon at 3490 feet by landing 6⅝-inch casing at 3545 feet. Drilling is underway below the 3870-foot level. This wildcat is located about two miles southwest of Graham.

White-Duncan et al's S. Webb-Pruett 9, an outpost well on the west side of the prolific shallow pool recently discovered in southeastern Archer County, encountered salt water in completing with an estimated initial output of 300 barrels of oil daily from broken sand at 705-720 feet. This well has a surface elevation of 1033 feet. Panhandle Refining Company is to undertake a Canyon lime horizon test on an old block of 440 acres held in southeastern Archer County. Lease owners that are to benefit by this test have agreed to contribute dry hole money, including Sinclair Prairie Oil & Gas Company, owner of an offset tract.

Hobbs Extension Location Will Require Offsets

Hobbs, N. M.—Three tests in the Hobbs field are nearing completion, and two new locations were authorized for the past week, including an outpost on the north end of the field. Skelly Oil Company's H. D. McKinley 1, located in the SWc N NW Section 20-18s-38e, will try for a one-third mile extension to the north, and if successful will require offsets from Tidal Oil Company and The California Company et al. Midwest Refining Company furnished the other new location with Byers 11, located in the SEc NW Section 3-19s-38e.

Midwest Refining Company's O. B. Terry 11, an inside location, was drilling below 4070 feet last week after having cemented oil string at 4031 feet. Shell Petroleum Corporation's Lizzie Rice 1, SEc Section 13-18s-37e, was coring at 3965 feet in saturated lime after cementing nine-inch pipe at 3922 feet. Empire Gas & Fuel Company's Hardin 4, a southwest offset, was drilling at 3880 feet.

Tidal Oil Company et al's State 1, an outpost test situated about one mile north of production in the Eunice field, was installing tanks and separator to drill in after cementing nine-inch casing at 3744 feet with a total depth of 3897 feet. Cores recovered from this test indicate possibilities of a large well resulting from the regular Eunice pool lime horizon.

North and West Texas Field Developments

WEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CRANE COUNTY—		
Gulf Prod. Co., J. T. McElroy 101..	380	2911
FISHER COUNTY—		
The Texas Co., T. A. Jean 2	150	3110
JONES COUNTY—		
Southern Oil Corp., Sears 1	*	2574
WARD COUNTY—		
Eastland Oil Co., Kate S. Green 1	75	2408
PECOS COUNTY—		
Corvette Oil Corp., H. Monroe 15..	80	495

WEST CENTRAL TEXAS

CALLAHAN COUNTY—		
E. P. Frazier et al, Jackson 2....	*	936
Kleiner Bros. et al, Isenhower 3....	*	606
Samuels Investment Co., Radford 3	45	412
Radford 4	15	408
Radford 5	50	400
Radford 6	*	422
Radford 7	*	421
Tex-Cal Oil Co., J. S. Hart 8.....	7	515
Terry & Duncan, Clark 1	¶¾	668
Ungren-Frazier & Kleiner, P. G. Hatshett 1	*	800
COLEMAN COUNTY—		
Arcadia Ref. Co., F. Golson 4.....	50	1597
Barnsdall Oil Co., F. Golson 4	70	1617
Canyon & Lane, Harris 2	30	1620
W. N. Newton et al, R. E. Harris 1	*	2122
J. C. & M. S. Schaffer, H. Campbell 1	¶2	1490
EASTLAND COUNTY—		
Lobough et al, H. C. Dakon 1	*	1900
The Texas Co., M. Gray 1 .....¶¼-1		3849
T. P. Coal & Oil Co., Fee 8, Durocher sur	135	2977
PALO PINTO COUNTY—		
Brazos River Gas Co., Jenkins-Sleigh 3	25	1522
R. E. Grounds et al, Watson-Robinson 1 .....¶6½-25		3036
Shastatex O&G Co., Baker 1	*	3204
SHACKELFORD COUNTY—		
Cross & Caskin, Webb 3	*	665
Gilman & McMurray, Jeter 4-C ..	20	928
Jeter 5-C	25	913
J. B. Gordon et al, McKelvey 1 ..	20	814
H. P. Mayes et al, A. J. Swenson 1	15	1606
Spencer & Whitiken, Sherron 1 ..	*	851
A. C. Walker et al, L. H. Hill 7....	*	818
Worth Pet. Co., J. W. Earhart 2..	*	853
STEPHENS COUNTY—		
M. K. Lyman et al, S. E. Beyer 1 ..	*	2205

NORTH TEXAS

ARCHER COUNTY—		
O. N. Beer & Deep Oil Dev. Co., Andrews 1	*	1555
C. W. Clark et al, Gulf Prod. Co. 1	*	1827
Fain-McGaha Oil Corp., E. R. Fain 3	120	1798
Kellerher & Bailey, Wilson 1.....	*	1550
Petroleum Producers Co., Ford 1..	*	1804
Shappell Oil Co., Hawley 1	†	2903
Underwood Drl. Co., Ward Bros. 3	*	1051
White-Duncan et al, S. Webb 6...	210	687
C. C. Williams et al, Matlock 2...	*	700
BAYLOR COUNTY—		
Consolidated Oil Co., Portwood 3-A	35	1416
Portwood 4-A	*	1419
COOKE COUNTY—		
Cline & Aggers, Piott 1	*	1057
Geo. Pace et al, Dennis 1.....	55	1531
Dennis 2	25	1548
JACK COUNTY—		
Brazos River Gas Co., Van Hooser 1 .....¶8¼		2901
B. C. Gilmore et al, Spearman 1...	*	580
Petroleum Producers Co., Garrett 1	*	850
WICHITA COUNTY—		
Chapman & Parker, Parker 2.....	*	205
E. H. Pigg et al, Foster 1.....	*	2114
WILBARGER COUNTY—		
Easter Oil Cp., W. T. Waggoner 1-F	*	1850
YOUNG COUNTY—		
N. D. Goldsmith et al, Dunagan 4, Sec. 163	75	931
Dewey Knox et al, Jones 1.....	*	3110
W. Newt Maer et al, Jones 1, Sec. 26	*	831
Marcus & Kruger, Teague 1, Sec. 1464	*	753
Mid-Tex. Production Co., Childress-Donnell 5	70	3305
J. W. Olsteen et al, Teague 1, Sec. 3403	*	855
Seitz-Comegys & Seitz, Bullock 1, Sec. 61	*	1003
Spudder Drl. Co., Carpenter 3, Sec. 164	*	948
D. L. Wolfe et al, Allison 1, Sec. 165	*	915

TEXAS PANHANDLE

CARSON COUNTY—		
Skelly Oil Co., H. Schafer (East) 11	420	3251
Texoma Nat'l Gas Co., E. L. Moore 1-T	¶38	2770
GRAY COUNTY—		
Danciger O&R Co., J. E. Williams 3	¶9-1200	2715
The Texas Co., S. W. McClarty 5-B	150	2673
MOORE COUNTY—		
Shamrock O&G Co., R. O. C. Brumley 2	†	3163

SOUTH TEXAS

Additional Acreage Proven in Pettus North Extension Area. Sand Thickness Indicates Good Well at Tuleta.

EARL POST, *Staff Representative, San Antonio*

Salt Water Marks South End of Government Wells

San Antonio, Texas. — Salt water made its appearance in the North Government Wells field of Duval County last week, likely defining the south and southeast boundaries. Buchanan & Terrell's J. T. Smith 1, a Sun Oil Company lease, NW NE Section 46, at a total depth of 2510 feet, showed salt water and has been abandoned. San Diego Oil Company's Hellar 1, on the 40-acre tract in Section 44, offsetting the Smith lease to the north, showed 17 fourbles fluid, much of it salt water, at 2340 feet. It is being worked with in an attempt to plug back and ream out in the upper part of the sand. Petroleum Finance Company, drilling C. W. Hahl 1, SW Section 46, nearly one half mile south of the west edge of the field, also made salt water at 2305 feet. It, too, is trying to work over to complete as an oil well higher in the sand.

After showing oil and gas from 2110 feet to 2144 feet in sand and shale breaks, Buchanan and Terrell drilled Hagist 1, Section 267, to 2161 feet, where it tested salt water. It subsequently was drilled to 2505 feet and abandoned. The well, eight miles northeast of the North Government Wells field, and in Duval County, is considered to have opened a new district. The concern will make location for another well immediately. Three miles northeast of the well and in McMullen County, Jawua and Crow have located E. R. Hagist 1, Section 467, Abstract 1179, R. W. Mills survey. Roy Baker and L. W. Capps have a lease on a block in the immediate vicinity on the Hagist ranch and will drill a test shortly. The three new wells undoubtedly will lead the way to the definition of this new district.

Second Tuleta Test Reports Thickness of Broken Sand

San Antonio, Texas.—Forty-seven feet of sand, broken with a little shale, was encountered in the second well to be drilled in the new Tuleta field, Bee County. This thickness forecasts heavy production and high ultimate yield from this new strike.

The well is The Texas Company's D. W. Cox 1, west offset to Nichols' Harris 1, discovery test. It topped the sand at 4090 feet or 4082 feet, the reports conflicting. It, however, is likely that the latter figure is correct. Total depth is either 4030 feet or 4037 feet. On a drill stem test, the sand showed 1400 pounds pressure on 3/8-inch choke in three minutes, showing a slight bit of oil. Casing has been set and a large gasser is expected.

The exact location of The Texas Company well is 810 feet from the south line and 250 feet from the east line of the southwest quarter, J. M. Uranga survey.

An extension of 1000 feet to the southwest is expected to the field as a result of the showing encountered by Coquat et al in J. P. Harris 1, which cored the sand from 4082 to 90 feet, showing heavy saturation. A drill stem test is being made, following which casing likely will be set. Whether the well will go deeper after drilling in or not is not known. It is located in section 13, 150 feet from the north and west lines of the northeast quarter.

North of the Pettus field in the extension area, additional acreage has been proven by Gulf Coast Oil Company's R. A. McKinney 3, which is located 597 feet east of the old McKinney 1 and 1135 feet north of the United Production Company's Ray 13. The well, in the S. Morris survey, is making 240 barrels daily on one-half inch choke and showing 75 pounds pressure from 3662-70 feet.

Amerada Starting Deep Test On Large Acreage Block

San Antonio, Texas.—Amerada Petroleum Corporation has finished two and one-half years work leasing and working out the geology on what is probably the largest single solid block of oil acreage ever taken in this country and is preparing to spud on the first of a series of tests. The company started work on the block in March, 1930, and finished the lease work several days ago. The block comprises about 85,000 acres and is approximately 30 miles long and ranges from three to five miles wide. There are 150 separate leases in the block, which extends from the town of Pearsall on the north far into Zavalla County on the southwest.

At lease 15 months of geological work has been done on the block in addition to a great deal of geophysical research. Fifteen core holes have been sunk on the acreage and both the geophone seismograph and the magnetometer instruments were employed in locating the prospective structure.

Only a little drilling has been done in this immediate area, and no deep wells have been drilled. The nearest well by which any control can be had is that of United North and South Development Company on the Little Ranch, 22 miles north of the Frio-Medina County line. At that point it is understood the formations are dipping to the south at a rate of 200 feet to the mile. The Little well topped the Edwards lime at 3800 feet; however, the top of the Edwards lime will be expected in the Amerada well at somewhere in the neighborhood of a mile in depth. Present intentions, it is understood, are to test first the Edwards lime, and should this not be productive, carry the well to the Trinity sand.

The well will be watched with more than ordinary interest, as it is a key to the deep oil situation in a vast portion of the South Texas oil district.

The test will be started with a big hole and it is likely about 1200 feet of surface casing will be set. This it is said will do away with the necessity of setting another string of casing before the well reaches the top of the Edwards lime, and not even then unless the Edwards shows indications of being productive. Test will be made every 500 feet to be certain the hole is being drilled straight.

It is estimated that Amerada Petroleum Corporation will have spent more than a quarter of a million dollars on this project upon completion of the first well. In case of misfortune and in case the well has to go to the Trinity sand the expenditure might represent a much larger figure.

Location for the first well has been made on the Halff and Oppenheimer ranch 1200 feet to the north line and 200 feet to the east line of the W. F. Halsel survey. Carl Short, drilling contractor of Fort Worth has the contract for drilling the well. A 125-foot steel derrick is now being erected on the location and drilling machinery is moving in. It is hoped to get the well spudded in during the next week.

Extension of Keeran Area Appears in Prospect

San Antonio, Texas.—A 9000-foot southeast extension and the opening of a new producing horizon in the Keeran area, Victoria County, seem in prospect as a result of the showing encountered in Union Oil Company of Nevada's Keeran 1, which has a sand at 5619-28

feet. A drill stem test is being made.

The well is located approximately 4165 feet southwest of the southeast corner of Victoria Oil Company's lease, thence 1389 feet southeast at right angles. It is in the M. de Leon survey.

The discovery well of the field, Victoria's Keeran 1, showed a large gasser with a little oil from 5182-91 feet in January of this year. The second well, the same company's Keeran 2, 1500 feet east of Keeran 1, came in August 10 from 5841-51 feet as an oil well. The first gauge on the well, made this week, showed 500 barrels daily through one quarter-inch choke in 24 hours, showing 1000 pounds pressure on the casing and 500 pounds on the tubing. It is flowing through 2½-inch flow line nearly a half-mile to storage tanks at Keeran 1.

Four wells have been drilled in the field, one resulting in a dry hole, two in producers and the fourth showing for some sort of production.

Nueces County Test Near Interesting Depths

San Antonio, Texas.—Nueces County interests resumes with several tests reaching interesting depths. Gulf Coast Oil Company's Bliss 1, Section 406, Saxet field, is in process of completion from 4533 feet, while the same company's Perkins & Legasse 2, Section 26, is in the throes of a fishing job at 4851 feet. McCarthy, Rogers, Nix, et al, have reached the 4100-foot level on Isencee 1, Block 12. Several other operations are drilling at shallow depths.

South Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BEE COUNTY—		
Coquat & Barnsdall, L. Roberts 2, Kerr sur	*	3857
Gulf Coast Oil Co., R. A. McKinney, S. Morris sur	240	3670
Slick-Seeligson, Ray 7, Kerr sur	*	3961
Texas Co., Gremmel 6, Pace sur	*	3953
BEXAR COUNTY—		
E. M. Carl, F. Gembler, J. Montez sur, temp. abn	*	826
CALDWELL COUNTY—		
Owen & Gunby, Dunlap 1, S. Seal sur	*	2257
DUVAL COUNTY—		
Buchanan & Terrell, Hagist 1, Sur 367	*	2505
J. T. Smith 1 (Sun), Sec. 46	*	2510
R. F. Byrd et al, P. T. Wright 1, Sur 101 (wo)	¶2½	2250
H. H. Coffield, Wendt 2, Sur 43	840	2298
Cole Pet. Co., Benavides 76, Blk 18, Sur 19	*	1763
Mag. Pet. Co., Wendt 4, Sur 44	960	2297
Texas Co., Duval Ranch 2-A, Sur 574	500	2438
GUADALUPE COUNTY—		
Borgan & Wormser, F. A. Pfullman 1, L. Bollinger sur	*	2334
KARNES COUNTY—		
Howeth et al, Pargman 1, V. Blanco Sur.	*	4525
STARR COUNTY—		
Hooks & Weaver, Kelsey Bass 11, Sec. 8, Los Olmos	*	476
Kelsey Bass 12, Sec. 8, Los Olmos	*	480
Rio O&G Co., Kelsey Bass 3, Sec. 6, Los Olmos	35	444
Tarver & Nance, Kelsey Bass 5, Sec. 7, Los Olmos	90	445
WEBB COUNTY—		
South Texas Oil Co., P. Rosenberg 7, blk 16, sur 271	75	2263
ZAPATA COUNTY—		
Allied O&G Co. & Allen & Morris, Gutierrez 36, Share 4, Fansler Partition, Comitas Grant	50	1477
SR&C Oil Corp., M. Trevino 6-E, blk 12, sur 65	40	1255

Wildcat Drilling Report

(Wells shut down not included)

ATASCOSA COUNTY—E. A. Parkford & F. H. Etheridge, J. Dickinson 1, McCampbell-Berry Sur No. 135, Lot a6, dr below 300 ft.

BASTROP COUNTY—Marts & Beavens, A. Neidig 1, J. Burleson sur, dr 2000 ft, Eagleford. R. R. Ogden, C. L. Riddle 1, Gray & Leach sur, dk. Parsons & Mayfield, Carroll 1, 10 mi sw Bastrop County, top serpentine 2300 ft, 2376 ft, show oil set cas. Properties Trading Co., Frietag 1, P. Conley sur, dr 1450 ft sandy shale.

BEE COUNTY—Coquat et al, J. P. Harris 1, Sec. 13, Tuleta, coring 4075 ft. Howeth & O'Neill, King Ranch Estate 1, 7 mi ne Beeville, dr 2725 ft. C. F. Nichols, J. Harris 2, blk 7, sec 2, rebld dk; Kimball 1, Stephen Winship sur, Grayburg area, dr 3250 ft. Nichols & Bruner, Hedelfels 1, John Ryan sur, 3½ mi se Beeville, move in. John O'Neill, J. P. Harris 1, Sec. 2, Tuleta, dr 3400 ft. J. Stanley Smith, Weiss, Sec. 1, Tuleta-Price, lcn. Texas Co., D. W. Cox 1, Uranga sur, Tuleta, 4090-4130 ft, sand with shale breaks, test 1400 lbs, little oil, 3/8 inch choke in 3 min, set cas, woc.

BEXAR COUNTY—Carter & Weinert, A. Gembler 1, J. Montez sur, dr 800 ft. Robert C. Hill, Schell 1, Sec. 236, Perretaux sur, dr 100 ft. Linda Oil Co., Watson 1, Crusie Ladin Sur. No. 46, ru. C. J. Webster O&G Co., S. A. Irrigated Farms 1, lot 2, blk 49, near Medina, dr 1000 ft.

BROOKS COUNTY—Ed A. East, A. Garcia 1, La Encantada sur, mov on.

CALDWELL COUNTY—C. D. Wilford, W. Ewald 1, James George sur, ru.

COLORADO COUNTY — Bunte & Shell, Rudolph Matuska 1, J. Henneke sur, bldg new dk.

COMAL COUNTY — Caldwell & Lanier, Byler 1, re-dr, now 830 ft.

DIMMIT COUNTY—Motes-Campbell Co., Denton 1, tract 33-34- blk 60, 12 mi sw Carrizo Spgs., set 8-inch cas 400 ft, re-dr.

DUVAL COUNTY—J. E. Anderson et al, Welder & Wood 1, Sec. 73, ne N. Gov't Wells, ru; Ruiz 1, Sec 73, lcn; Fiser 1, Sec. 73, lcn. Buchanan & Terrell, Hagist 1, Sec. 267, near McMullen line, dr 2430 ft. R. B. Byrd, P. T. Wright 1, Sec. 101, N. Gov't Wells, mov on. Capps & Smith, Duval Ranch 4, Sec. 576, set cas 2340 ft, prep to dr in; Sutherland 1, sur 186, mov one. H. H. Coffield, Wendt 3, sur 43, N. Gov't Wells, dr 1000 ft. Delange & Frates, Sevier 1, sur 213, 13 mi e Gov't Wells, dk. Humble O&R Co., P. White 6, sur 58, Gov't Wells, drill 2090 feet. Edwin M. Jones, J. F. Williams, sur 131, Sarnosa, td 500 ft, dr new water well. Magnolia Pet. Co., Wendt 5, sur 44, dr 2000 ft; Wendt 6, sur 44, lcn. McGinley Corp., J. A. Lundell 1, Sec. 48, Gov't Wells, dr 1000 ft. George Parr, Benavides School District, sur 44, Rosita, dk. Payne & Vernon, A. Roach 1, sur 457, no rept. Pet. Finance Corp., C. W. Hahl 1, Sec. 46, swabbed sw 2305 ft. San Diego Oil Co., Riley 2, Sec. 44, dr 1800 ft; Hellar 1, Sec. 43, test 17 fourbles sw 2340 ft. Sarnosa Oil Co., Weil 2, Sec. 130, ru. Seacord & Putnam, Johnson 1, Sec. 44, deepening from 1564 ft. Sun Oil Co., Cano 2, sur 576, dr. Southwest Drlg. Co., Wendt 2, Sec. 43, set cas top snd. Texas Co., Freer 2, Sec. 45, dr 2000 ft. Thomas & Tarver, Duval Co. Ranch Co. 2, sur 576, skid dk. Whisenant, Trenchard & French Oil Corp., C. W. Hahl 2, Sec. 44, Rosita Townsite, mov on.

FRIO COUNTY—Amerada Pet. Co., Halff & Oppenheimer 1, W. F. Halsel sur, ru.

GOLIAD COUNTY—Benedum & Trees & Plymouth Oil Co., Parks 2, BS&F sur No. 8, fsh 5460 ft. Rowan & Hope & Phillips Pet. Co., Irby 1, Jesus Ybarbo sur, mov in rig. Slick Estate, Inc., Allen 2, dr 4000 ft.

GONZALES COUNTY—Luling O&G Co., Dubose 1, F. R. Whitner sur, dr around 600 ft.

GUADALUPE COUNTY—B. E. Brock et al, Ogletree 1, Robert Smith sur, 1 mi from Luling field, td 1805 ft, testing. E. C. Brogan & Wormser, Hempel 1, Sal-Mar, ru. Keen & Russell, Lowman 1, near Staples, dr 100 ft. Owen & Gunby (Shell) C. F. Appling, Samuel Highsmith sur, Dunlap, mov in. Geo. E. Smith, Behring 1, Sal Mar, cored 1995-2023 ft, top Austin chalk 2013 ft, showing oil, set cas.

JIM HOGG COUNTY — Jack A. Tarver, Martinez 1, sur 623, dk.

JIM WELLS COUNTY—Catlett & O'Neill, H. D. Miller 2, J. M. Andrate sur, dr 2751 ft. Larcro Gas & Pet Co., Wade 3, lcn.

KLEBERG COUNTY—Ted Harrison & O. M. Beer, Dennett 1, 3 mi s Kingsville, sp.

LEE COUNTY—Paton Bros., C. A. Turner 1, David Hudson sur, near Tanglewood, td 5674 ft, lost ds again.

LIVE OAK COUNTY — Durbin et al, J. Marbach 1, S. Hayes sur, dr 450 ft. Live Oak Pet. Co., Harper 1, J. Pointavent sur, prep to re-dr 515 ft.

McMULLEN COUNTY — Roy Baker & L. W. Capps, Hagist 1, to make lcn. Jacob, Buzzini & Pickett, Inc., Jacob 5-A, W. H. Jacob sur No. 10, top snd 937 ft, set 6⅝ inch cas 936 ft, dr in. Jaqua & Crow, E. R. Hagist 1, sur 467, Abstract 1179, 3 mi ne Hagist gasser, lcn. Longhorn Oil Co. & American Gas Co., Lark 1, E. W. B. Scrugham sur, sd 474 ft, boiler trouble.

MILAM COUNTY—Birdwell et al, Terry 1, Jose Leal sur, dk. M. W. Eiser, Citizens National Bank 1, dr 1570 ft. Glass et al, Ellison 1, dr 1500 ft. Huff & Koch, Lee 1, D. Harmon sur, sp. Mitchalk & Clark, Johnson 1, dr 2127 ft, Georgetown. Wilder, Van Huss & Ediston, Von Gonton 1, M. J. Delgado sur, dr 2475 ft, Austin chalk.

NUECES COUNTY—Gulf Coast Oil Co., Frank Bliss 1, Sec. 406, Saxet, dr out plugs 4533 ft; Perkins & LeGasse 2, Sec. 26, Saxet, fsh for dr pipe 4851 ft. Houston Oil Co., Harrell 2-A, Sec. 28, Saxet, dr 2960 ft; Walton 1, Rge. 6, Sec. 9, dk. McCarthy, Rogers, Nix et al, Isencee 1, blk 12, dr 4080 ft.

REFUGIO COUNTY—Humble O&R Co., O'Conner 2, Keathing sur, try to mill out cas 2214 ft. Edwin M. Jones, J. Mitchell 1-B, Refugio sur, td 9131 ft, fsh for ds. Larcro Gas & Pet. Co., Strauch 2, sp and sd.

SAN PATRICIO COUNTY—Camp & Stanolind O&G Co., Bennett 1, Sec. 8, Paul sub, J. J. Welder sur, plugged back from 4753 ft to 4580 ft, completing, showing sw, oil and gas.

STARR COUNTY — L. W. Conner et al, Sanchez 1, sur 344, 12 mi n & e Roma, ru. Frank Deyno, Seabury, Goe & Taylor 1, share 5, sp. Grass Roots Oil Co., Gonzales 2, Sec. 339, 15 mi ne Town Roma, ru. Jeffries-Lambert Drlg. Co., Starr County Cattle Co. 1, blk 34, Por. 89, sp. Stryalls Oil Corp., Caffarelli 1, share 19-A, Por. 80-81, dr 650 ft.

VICTORIA COUNTY—Houston Oil Co., A. M. McFadden 1-A, IRR No. 20 sur, sidetracking 1673 ft. Humble O&R Co., P. Rydolph 1, Kemper sur, dr 4815 ft. Slick-Seeligson Corp., McFadden 2, ru to deepen from 4496 ft. Texas Com. A. M. McFadden 3, J. M. Rine sur, pulling liner to deepen from 5832 ft. Union Oil Co., Keeran 1, M. de Leon sur, snd 5619 ft, to make dst.

WEBB COUNTY—Montez Oil Co., M. Vela 1, sur 267, blk 14, dk. Norden & Morris, Gates-Kirkpatrick 3, blk 5, Sec. 19, ru. Newton Drlg. Co., A. Garcia 1, sur 52, dr below 1000 ft. South Texas Oil Co., P. Rosenberg 8, blk 10, sur 271, sp.

WILSON COUNTY—August Blume, Nicholsen 1-A, M. J. Hernandez sur, 2½ mi s Floresville, show litle oil, plenty water slightly below 900 ft, 6⅝ inch cas set 890 ft.

GULF COASTAL FIELDS

Humble Erecting Deep Well Derrick on Galveston County Prospect. Conroe Drilling Activity Is Increasing.

WM. V. GROSS, *Staff Representative, Houston, Texas*

Productive Territory at Conroe Further Defined

Houston.—The Conroe field of Montgomery County continues to monopolize a large share of interest in Gulf Coast field developments, and as progress is being slowly made toward outlining the productive limits and ascertaining the nature of the structure responsible for occurrence of the oil accumulation drilling activity is assuming larger proportions.

Completions are now being scored at increasingly smaller intervals due to increased number of rigs in operation and growing familiarity with the formations penetrated, as evidenced by the placing of two new wells on production the past week to boost the number of producing wells in the field to nine; while there were six other wells at the close of the week which had reached prospective producing horizons or which were approaching depths expected to furnish oil sands.

Proration Suspended

Production in the field had averaged 4050 barrels daily during the week ending August 20, but a material increase over that rate was expected for the week closing August 27, due to addition of new producing wells in the area and the temporary suspension of proration recently authorized by the railroad commission; such lifting of production restrictions having been made effective to August 30, when the commission will hold a hearing at Austin preparatory to issuing a new order governing proration allowances. The Conroe field has already been furnished two pipe line outlets, an eight-inch line operated by Humble Pipe Line Company and a six-inch carrier of The Texas Pipe Line Company.

Operations Increased

Drilling activity at Conroe had expanded by the close of the past week to include a total of 21 operations exclusive of tests classed as wildcats, while work in the virgin districts, encouraged in most instances by performance of the Conroe field, had pushed the volume of activity in Montgomery County to a total of 27 operations.

The 21 operations in the Conroe area proper included 12 wells actually drilling, two rigging up, two with derricks up or under construction, four new locations, and one test shut down.

Sixteen different companies or individuals were represented among the operators fostering the 27 field operations in Montgomery County, and among them are only three so-called major concerns: Humble Oil & Refining Company, The Texas Company, and Houston Oil Company. Those three large companies, however, contributed 12, or nearly half of the total operations. The Texas Company and Houston Oil Company were represented with only one operation each, furthermore, so that Humble Oil & Refining Company with its 10 operations stood out prominently as the leader of development work in the district. Its 10 operations included seven wells actually drilling, one rigging up, and two locations. The role of the company as leader in field development is in keeping with its position as the largest lease-owner in the area.

Montgomery County Operations
(As of August 27, 1932)

Producing Wells

Number of producing wells in Conroe field	9

Drilling Operations

	Drlg. wells	Rigs up	Derricks	Locations	Shutdown	T'l drlg. operations
Conroe	12	2	2	4	1	21
Wildcats	4		1		1	6
Total	16	2	3	4	2	27

Producing wells which have been completed in the Conroe field are scattered over an area about three miles in extent from east to west and about one mile north and south.

Extension South

Whereas the productive area was extended slightly eastward a week ago through completion of Humble Oil & Refining Company's C. C. Steinberger 1, John A. Davis Survey, the field was given a slight southern extension the past week when Moore & Bruton brought in W. N. Hooper, Jr., No. 1, in a 10-acre tract, I.&G.N. Survey, as a producer which flowed 850 barrels of high gravity oil the first 12 hours through a three fourths-inch choke from depth of 5050 feet. The well is about 4000 feet southeast of Heep Oil Corporation's producer on the Freeman land, and 2500 feet southwest of the above mentioned well on the Steinberger lease.

The other of the two wells completed last week was Hamilton, Hill & Hill's Gilbert 1, J. Davis Survey, east offset to Heep Oil Corporation's Freeman 1. During the first 16 hours after completion it flowed 775 barrels of oil through tubing and a one-inch choke, registering 200 pounds pressure.

Initial Test Starting on Greens Lake Prospect

Houston.—Drilling will be started within a short time on a hitherto untested Gulf Coast salt dome prospect which has shown up favorably through extensive geophysical work.

The area referred to is the Green's Lake prospect, sometimes called the Coon Ranch prospect, located about four miles southwest of Hitchcock in southern Galveston County, and the original test well scheduled to be drilled there is Humble Oil & Refining Company's Elias V. Rosenkranz 1, which has been located in a 200-acre tract in the S. A. White Survey, 6380 feet west from the northeast corner of the survey along the north line of the survey and 3950 feet south at right angles.

Late last week Humble Oil & Refining Company was rigging up a heavy rotary rig on the location after having erected a steel derrick of the unusually great height of 164 feet. The type of drilling equipment which has been installed offers indication that the test will quite likely be drilled to an unusually great depth, and suggests that the dome or structure pictured by the geophysical instruments is regarded as being deeply buried.

Original geophysical prospecting which gave indication of the presence of a dome here was torsion balance work carried out by Humble Oil & Refining Company in 1928, but the revelations of the torsion balance were also confirmed subsequently by seismograph shooting.

First Salt Is Drilled In Leesville Field

Houston.—The Leesville field in La Fourche Parish, Southern Louisiana, has been added recently to the long list of definitely established salt domes of the Gulf Coast, although it has been a producing field since early in 1931. Proof of the presence of a salt dome has been obtained by The Texas Company in L.L.E.-Leesville 5, which was last week reported drilling salt slightly below 4100 feet. The well had formerly produced oil from about 3600 feet, but was deepened after it ceased flowing.

Leesville is among the numerous Gulf Coast fields found through geophysical prospecting, and particularly favorable results have attended development there, the second test establishing production, and each of four succeeding tests likewise proving productive.

Texas Gulf Coast Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BRAZORIA COUNTY—		
Quintette Oil Co., Levitt 2, Jno. Peske sur, 35 ft nw No. 1.....	*	2190
CONROE—		
Hamilton, Hill & Hill, Gilbert 1, J. Davis sur, e offset to Heep-Freeman 1 1200		5125
Moore & Bruton, Hooper 1, I&GN sur 1700		5050
HUMBLE—		
J. D. Clay, Bender 2	50	1225
Sun Oil Co., River 58	275	1416
PIERCE JUNCTION—		
Moody-Pure, Herman Hospital 1..	530	4847
RABB RIDGE—		
Gulf & Humble, Lockwood-Sharpe A-7 1090		5315

Wildcat Drilling Report

(Wells shut down not included)

AUSTIN COUNTY—Great Southern Drlg. Co.'s F. Schovajsa 1, 3 mi s Bleiberville, S. F. Austin 4 Leagues, rebldg dk which blew down, td 2783 ft shale.

BRAZORIA COUNTY—W. D. Southerland et al's C. W. Chapman 1, Andrew Robinson sur, near Lochridge, dr 4610 ft shale. Shell's Blakely-Winston 5, Danbury, made location 1410 ft ne and 1200 ft nw of south cor of Sec. 14, H. T. & B. R. R. sur. The Texas Co.'s Belcher 3, Manvel, drilling plug after setting cas around 4000 ft to test oil sand.

BRAZORIA COUNTY—Dew, Dickerson & Wicklyne's Mosely 1, W. Mathis sur, dr 225 ft gbo.

BURLESON COUNTY—Poor Boy Oil Co.'s (was Ball Knob Oil Co.'s) Polansky 1, 6 mi w Lyons, M. B. Lawrence sur, dr 1040 ft sandy shale. Shilo Oil Co.'s Bracey 1, J. Lastly sur, near Somerville, dr 1750 ft shale. Sanson O&G Co.'s Duckworth & Gilley 2, P. Singleton sur, near Clay, dr 1000 ft shale.

COLORADO COUNTY—Bunte et al's Matuska 1, Jno. Hennecke sur, 8 mi ne Alleyton, rebldg dk which blew down after drlg to 300 ft.

FORT BEND COUNTY — Naylor & DeCosta's Naylor 1, 1½ mi n Thompson, Horatio Chrisman sur, dr 5350 ft shale. North Star Pet Co.'s Guyler 1, 3 mi nw Orchard, Andrew Roberts sur, rebldg dk which blew down, depth 950 ft gbo.

GALVESTON COUNTY — Humble's Elias V. Rosenkranz 1, Greens Lake prospect, 4 mi sw Hitchcock in Sarah White sur, ru. H. H. Stevenson's E. Lobitt 1, 3 mi sw Dickinson in J. F. Perry & E. M. Austin sur, sd 475 ft.

GRIMES COUNTY—W. J. Brightwell's Combs 1, ru.

HARDIN COUNTY — W. R. Alexander et al's Southwestern Lbr. Co. 1, 3½ mi ne Votaw, Mary K. Sherman sur, dr 2865 ft water sand. Republic Prod. Co.-Houston Oil Co.'s Ariola Fee 1, Ariola prospect, E. Ariola sur, prep to dr deeper fr 3286 ft after testing salt water with slight show of oil. Houston Oil Co.-Republic Prod. Co.'s Ariola Fee X-1, E. Ariola sur, ru. Joe E. Proctor et al's J. R. Bevil 1, dr 2325 ft shale.

HARRIS COUNTY — Bayou Prod. Corp.'s Dermoody 1, 1 mi w Fauna, Wm. Hedge sur, rebldg dk with bottom of hole at 1640 ft gbo. Jno. Deering's Warren 1, Hockley, Theo. Snell sur, trying sdtr dr stem at 2400 ft. Framar O&G Corp.'s Woodburn 1, Genoa prospect, Aug. Whitlock sur, lcn. Crown Central Pet. Corp.'s Siadous 1-A, Mykawa, dr 4040 ft shale.

JASPER COUNTY—P. Michael's F. L. Eck 1, G. C. & S. F. Sur No. 1, dr 100 ft gbo.

JEFFERSON COUNTY—Jack Schultz's O. M. Todd 2, approx 2000 ft s No. 1, dr 875 ft gbo. Coat O&G Co.'s J. O. B. Young 1, 3 mi ne Pt. Arthur, Jos. Grigsby sur, dr 1300 ft lime.

LIBERTY COUNTY—J. T. May's Dunman 1, J. C. Martin League, north cent. part of county, preparing to spud. Leon Brisley Tr.'s J. M. Neal 1, E. Tanner sur, sd 1950 ft.

MATAGORDA COUNTY—Sheppards Mott Dev. Co.'s Hawkins 1, Sheppards Mott, fsh 5025 ft. United North & South Dev. Co.'s Stoddard 1, Buckeye townsite, coring sand at 7923 ft.

MONTGOMERY COUNTY — Alpha Pet. Corp.'s R. R. Dunn 1, M. W. Real sur, dr 4515 ft shale. Gieske & Craft's South Tex. Dev. Co. 1, T&NO sur, No. 9, coring 5315 ft; Keystone Mills 1, A. S. James sur, dr 2010 ft. Gulf Coast Dr. & Prod. Co.'s So. Tex. Dev. Co. B-1, Theo. Slade sur, dr 1400 ft shale. Hooper Oil Corp.'s W. N. Hooper Jr. 1, I&GN sur A. 649, bldg dk. Houston Oil Co.'s C. L. Dobbins 1, Ransom House sur, lcn. Humble O&R Co.'s R. L. Cartwright 1, Jno. Davis sur, dr 5010 ft shale; C. L. Dobbins 1, Ransom House sur, dr 5095 ft sandy shale; So. Tex. Dev. Co. 4, T. C. Howell sur, set cas over sand at 5187 ft; So. Tex. Dev. Co. 5, dr 1420 ft shale; So. Tex. Dev. Co. 6, dr 1425 ft lime; No. 7 dr 600 ft; No. 8 dr 1450 ft sand; No. 10 moving in rig. Lilley & Red Moon Oil Co.'s McDonald 1, J. Davis sur, dr 800 ft. Rowe & Flowers' Alexander 1, Alex McCown sur, preparing to dr plug at 5096 ft after cementing back from 5254 ft. G. W. Strake's So. Tex. Dev. Co. 3, Theo. Slade sur, dr 5965 ft hard sand. The Texas Co.'s Moody 1, ru. R. H. Vise et al's L. S. Ross 1, dr 4020 ft black shale. McElroy Oil Corp.'s C. A. Damuth 1, T. J. Nichols sur, dr 3415 ft shale. Miller Prod. Co.'s Foster Lbr. Co. 1, M. B. Lawrence sur, dr 800 ft sandy shale.

NEWTON COUNTY—Sun Oil Co.'s Peavey-Moore 1, F. Stover sur, No. 4, sw corner of county, dr 3232 ft shale.

SAN JACINTO COUNTY — Darby-Jones-McBee Drlg. Co.'s J. R. Bennett 1, nw Cold Springs, dr 1100 ft sandy shale. Joe L. Pace's Foster Est 1, H&TC sur No. 3, ru.

WALLER COUNTY—Seven Wells Corp.'s Maxwell 1, Justo Liendo sur, rebldg. dk, depth of hole 3200 ft in shale.

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Louisiana Gulf Coast Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CAMERON MEADOWS—		
Magnolia Pet. Co., Cameron Meadows 2, wo, 21-14s-13w	140	5273
EAST HACKBERRY—		
Calcasieu Oil Co., Unsurveyed Island 1, wo, junked acct of heaving shale	*	3035
STARKS DOME—		
Emerson & Stark, Industrial 1, wo, hit salt	*	3325

Wildcat Drilling Report

(Wells shut down not included)

ASCENSION PARISH—Rio Bravo Oil Co.'s Community 1, Darrow, sec 31-10s-2e, dr 1600 ft gbo.

CALCASIEU PARISH—Magnolia Pet. Co.'s B. T. Waite 2, Iowa, dr 5512 ft shale; Bordages 9, Lockport, oil show in sand at 6668 ft. Union Sulphur Co.'s Moss 3, Lockport, oil show at 5509 ft. I. R. Irvine's A. D. Minne 1, 20-9s-7w, dr 300 ft.

CAMERON PARISH—Union Sulphur Co.'s Pure Oil Co. 1, nw flank E. Hackberry dome, dr at 7050 ft in sand in new hole after sdtrk out of 8325 ft hole at 5150 ft.

IBERVILLE PARISH—Shell Pet. Corp.'s Wilbert 6, White Castle, 9-11s-12e, ru. Standard's Myrtle Grove Wilbert 3, Choctaw, ru.

JEFFERSON DAVIS PARISH—Shell's Fontenot 2, 7-9s-6w, dr 2800 ft. Little City Oil Co.'s Jennings Norwood 1, 44-9s-3w, dr 3800 ft shale.

LA FOURCHE PARISH—The Texas Co.'s LLE-Leesville 5, Leesville dome, 26-21s-22e, dr 4107 ft salt.

TERREBONNE PARISH—The Texas Co.'s Lake Barre 16, 30-21s-20e, dr 3595 ft shale; No. 17 dk; LLE-Lake Barre 3, 30-21s-20e, dr 3690 ft sand.

VERMILION PARISH — Pure Oil Co.'s Mulvey Irrig. Co. 1, Gueydan, 34-11s-1w, dr 3628 ft sticky shale.

VERNON PARISH—Minerals Div. of Llano Co.'s Llano del Rio 1, 2 mi sw Leesville, 34-2n-9w, dr 1425 ft shale.

LOUISIANA FIELDS

All North Louisiana Drill Activity Centers at Zwolle

Shreveport.—Nine new locations, all for the Zwolle field in Sabine Parish, were announced during the week ending August 24. Five completions were reported in Zwolle, two of them being producers and the other three dry holes. J. H. Askew's Henderson 1, SW SE Section 31-8-10, in a recent northeast extension of the Zwolle east field, was completed in chalk at 2497 feet flowing 150 barrels of oil daily by heads. In the southwest extension from the Zwolle townsite Baird Brothers' Martinez 2, Section 2-7-13, is flowing 300 barrels of oil daily from chalk at 2105 feet.

Two tests northeast of Zwolle east field production were abandoned. Pelican Natural Gas Company's Buckley 2, Section 6-7-10, was dry at 2807 feet and H. W. Perritt's Brown Lumber Company 1 was dry at 2763 feet, although it showed a little oil. Sabine Production Company's Sabine 2, Section 3-7-13, was dry at 2450 feet in chalk.

Zwolle now has 105 operations divided as follows: locations, 26; derricks, 17; rigs, five; drilling, 19; setting 4½-inch casing, one; setting six-inch casing, nine; waiting standard rig, 11; and shut down 17.

Nacatosh Sand Test at Haynesville Abandoned

Shreveport.—W. E. Rembert and associates' J. L. Hunt 1, Section 18-23-8w, Claiborne Parish, a Nacatosh sand test on the north edge of the old Haynesville oil field which produces from the Blossom, was abandoned last week as a salt water hole at 1452 feet.

North Louisiana Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CLAIBORNE PARISH—		
W. E. Rembert et al, J. L. Hunt 1, 18-23-8	*	1452
SABINE PARISH (Zwolle)—		
J. H. Askew, Henderson 1, 31-8-10	150	2497
Pelican Nat. Gas Co., Buckley 2, 6-7-10	*	2807
H. W. Perritt, Brown Lbr. Co. 1, 6-7-10	*	2763
Baird Bros., Martinez 2, 2-7-13	300	2105
Sabine Prod. Co., Sabine 2, 3-7-13	*	2450

New Operations

CALCASIEU PARISH — Texla Oil Corp., Lake Charles, Federal Land Bk. 1, Sec. 6-10s-12w, 200 ft e and 200 ft s nw cor nw ne Sec.

LA FOURCHE PARISH—States Prod. Co., Thibodeaux, Swamp 1, Sec 70-15s-15e, 580 ft s and 90 ft e nw cor sec.

SABINE PARISH—J. M. Bridges, Pleasant Hill, F. Moore 1, Sec. 5-9n-12w, 330 ft w and n se cor ne nw of Sec.

TERREBONNE PARISH—The Texas Co., Shreveport, State Lake Barre 19, 36-21s-19e, Approx. 350 ft southerly from T. T. Co. State Lake Barre 11 Sec. LLE-Lake Barre 6. Sec 36-21s-19e, Approx. 400 ft southwesterly from T. T. Co. LLE Lake Barre 4.

Wildcat Drilling Report

(Wells shut down not included)

BOSSIER PARISH — Steckel & Breazeale, Nattin 1, sw ne 15-22-14, dr shale 2708 ft.

CADDO PARISH—Jno. W. Moffit, Cynosure 1, 36-18-15, lcn. Louanna O&G Co., Cushman 1, ne sw 33-19-16, ta 2800 ft; Cushman 2, 33-19-16, dk.

CLAIBORNE PARISH—United Gas Pub. Serv. Co. et al, Warren Brown 1, 1-19-16, 9-in. 4204 ft, dr 4242 ft. Robertson & Aurand, Smith 1, 8-21-7, dk pat.

CONCORDIA PARISH—M. M. Stoker et al, Gillespie 1, 56-8-10, rig.

DE SOTO PARISH — De Soto Dev. Co., Nickie 1, 7-13-12, rig. Walters & Nicholson, Jim Guy 1, 3-11-13, wo cas, td 2764 ft. Honeycutt O&G Co., Porter 1, 26-12-13, dk. Jack Whitson, Sanders 1, sw sw 19-11-13, rig. E. T. Oakes, Johnson 1, 30-13-15, core 3869 ft.

GRANT PARISH — Security Pet. Corp., Swope 1, 16-9-1e, wosr, 1585 ft. Robichaux et al, Bradford 1, 16-9-1e, rig.

NATCHITOCHES PARISH—Saline Bayou Dev. Co., Bodcaw Lbr. Co. 1, 9-12-15, sd 1080 ft. Natchitoches Pet. Co., Edenborn 1, 4-11-16, sp 10-in 105 ft.

OUACHITA PARISH—Monroe Oil & Roy. Co., Thieler 1, 34-18-2e, dr 1605 ft.

RED RIVER PARISH—C. F. Davis, Peterson 1, sw nw 12-14-11, dk. Petroleum Ind. Inc., Madden 1, sw ne 21-14-10, tested show gas and dead oil 2667 ft, arr deepen.

SABINE PARISH—J. M. Bridges, Moore 1, ne nw 5-9-12, 10-inch 88 ft. Bridwell O&G Co., La. Long Leaf 1, ne nw 31-8-10, sp sd 1000 ft. J. R. Bunn, Sabine 1, 9-7-13, dr 1150 ft. H. W. Perritt, Brown L. Co. 3, nw ne 31-8-10, 10-inch 140 ft. Loring Oil Co., Bowman-Hicks 18, 15-7-12, 10-inch collapsed at 1965 ft, sdtr and cemtd wo, td 5277 ft. King, Tr., Davis 1, 29-7-11, lcn; Webb 1, nw nw 31-8-11, 6-inch 2234 ft, blg, td 2400 ft. State Prod. Co., Davis B-1, 17-7-10, dk. Langford et al, Sabine 1, 8-7-13, dk. H. C. Maulding, Moores 1, se ne 16-7-13, sp dr 450 ft. Geo. LeGrande, McGough 1, 2-8-10, dr 1500 ft. Triangle Drilling Co., La. Long Leaf 1, se se 11-6-11, dr 4000 ft chalk. J. W. Askew, Henderson 1, sw se 31-8-10, wosr, 2497 ft; Lyons 1, 31-8-10, dk. Magnolia Pet. Co., Williams 1, 6-7-10, makes 70 bbl oil head daily, wosr, td 2490 ft. Ben Merritt, Tr., Chadick 1, sw ne 31-8-10, set surf cas. Bee Oil Co., Hill 1, 32-8-11, 6-inch 2239 ft. I. Daniels, Armstrong 1, se nw 31-8-10, dk. C. M. F. Oil Co., Musser & Aaron 1, 32-9-13, dk. Crescent Drilling Co., Willams 1, 21-7-12, rig. Gibson & Johnson, Frost Lbr. Co. 1, 19-9-13, dk. Frost Lbr. Co. 2, 15-9-13, rig. P. L. Miller, Chadick 1, 32-8-10, dr 870 ft. State Prod. Co., Lites 1, 28-8-11, lcn. Texas Co., Stille 4, 33-8-11, lcn.

TENSAS PARISH — H. B. Schumacher, Curry 1, 39-11-12e, owdd, dr 3610 ft.

VERNON PARISH—Llano Coop. Colony, Fee 1, 34-2n-9w, core 1550 ft. Earl Jones, Willis 1, 32-3n-9w, dk.

WEBSTER PARISH—Pearce et al, Ambrose 1, 22-20-10, dr 1060 ft.

WINN PARISH—P. V. T. Oil Co., Southern Advance Paper Co. 1, nw sw 28-13-5, dr 430 ft.

ARKANSAS FIELDS

Completions in Arkansas Shortens Active List

El Dorado, Arkansas.—One completion, a failure in the Union County part of the Smackover field, was recorded during the week ending August 24. The abandoned test is Artex Oil Company's Goodwin 1, Section 31-16-15, a dry hole at 2139 feet. Arkansas had no new locations during the week.

Fitzwater and Associates' E. L. Beck 1, SW SE Section 35-15-26, Miller County, in which sand with a saturation of oil was claimed at 2919-20 feet, and in which a string of 6⅝-inch casing was cemented above the sand, is drilling ahead at 2930 feet. The test is reported to have shown salt water at 2870 feet.

Stephens Field Loses Line Outlet; Production Down

El Dorado, Arkansas.—Daily average production in the Stephens, Arkansas, field which had been averaging around 550 barrels has dropped to around 275 barrels daily as a result of the field be-

ing left without a pipe line outlet. Atlantic Oil Producing Company recently discontinued its pipe line to this field, which was the only pipe line outlet. Production since then has been going into storage and as this is rapidly being filled the daily production has dropped sharply. All the wells in the field are pumpers.

Arkansas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
Artex Oil Co., Goodwin 1, 31-16-15	*	2139

Wildcat Drilling Report

(Wells shut down not included)

CLEBURNE COUNTY—Frank S. Craver et al, Donithan Lbr. Co. 1, sw sw 34-11-9, dr 138 ft.

DREW COUNTY — Cooperative Dev. Co., Ogles 1, 35-13-5, dr shale and gumbo 3135 ft.

FRANKLIN COUNTY — Ozark Nat. Gas Co., Monroe 1, 13-8-29, dr 575 ft.

LITTLE RIVER COUNTY—Harrell et al, Taafe 1, 25-12s-32w, dr hd lime 2235 ft.

MILLER COUNTY—Fitzwater et al, E. L. Beck 1, sw se 35-15-26, tested sw 2870 ft sand show oil claimed 2919-20 ft, 6⅝ cas 2919 ft, dr 2930 ft. C. J. Norsen 1, se sw 20-15-27, 10-inch 121 ft; E. A. McCowan 1, nw se 22-15-28, dk. Fred Peterson, Fouke 1, 11-17-27, tested, td 2252 ft.

PIKE COUNTY—Kentucky O&G Co., Inc., East 1, 13-9-23, rig.

ST. FRANCIS COUNTY—Kentucky O&G Co., Inc., Britton 1, ne nw 1-4n-1e, dr hd shale 2885 ft.

Southeastern States

South Alabama Test Quits Short of Proposed Depth

Mobile, Ala.—Ohio Oil Company has abandoned Bethel 1, NW SW NE Section 34-3s-2w, Mobile County, Alabama, at 5681 feet in Selma chalk which was logged at approximately 5600 feet. A drill stem test at this depth showed only a little muddy water, it was reported. Cores of the chalk indicated it was lying flat. This well was spudded about two months ago as a 7000-foot test but later it was indicated it would be taken only to about 5500 feet at present.

South Alabama Oil & Gas Company has rented a rig from John Glassell, Jr., of Shreveport to drill St. Stephens A-1, Section 26-7n-1w, Washington County, South Alabama, where derrick has been up for some time. The rig is now at the location. Testing of shallow gas around 1300 feet which has shown up in several tests drilled in that general area will be the first objective of this well and then it is planned to continue it deeper, probably to the Tuscaloosa.

Two Locations Replace One Completion at Jackson

Jackson, Miss.—One gasser and two new locations were recorded in the Jackson gas field during the week ending August 24. Ridgeway & McGehee's Mosal 2, SE NE SW Section 24-6n-1e, Hinds County, was completed at total depth of 2498 feet in Midway chalk gauging 31,250,000 cubic feet of gas. Black shale was logged at 2383 feet and chalk at 2486 feet; elevation is 327 feet.

Jackson Oil & Gas Company has derrick up for Mayes 4, located 1400 feet east and 211 feet south NWc Section 1-5-1e, Hinds County, and Home Oil Producing Company also has derrick up for South Jackson Land Company 1, NE NW NW Section 23-5-1e.

Oil Show in Lamar County Alabama Well Tests 26.5

Vernon, Ala.—A sample of the oil which showed in P. J. McAlpine and associates' (De Soto Oil & Gas Corporation) Gardner 1, NW NW Section 22-15s-16w, Lamar County, Alabama, the best oil

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show ever obtained in that state and which was secured in the Pennington of the Mississippian at 3125-37 feet, tested 26.5 gravity, according to a test made by the State Geological Survey of Alabama.

Later this well was deepened a few feet and at 3147 feet another sand appeared. Arrangements were being made to make another test last week with total depth of 3148 feet in shale.

Jackson Oil Test Shows Low Cold Test

Jackson, Miss.—Henslee and associates' Warner 1, NW NE SE Section 14-5-1e, Rankin County, which has flowed much heavy oil and later oil with much salt water, from total depth of 2470 feet, has been tubed with 1200 feet of two-inch tubing and 300 pounds of gas used as a lifting force. When allowed to flow it showed 500 barrels of oil daily and 3000 barrels of warm salt water. It is on the southeast flank of the Jackson field.

The following tests were made of the crude from this well:

Gravity, 13.6; flash point, 285 degrees F.; viscosity, Furol at 122 degrees F., 202; pour test, 0 degrees F. Per cent water and sediment, 10.0 (8 per cent water); sulphur content, 1.82 per cent.

Yields

Gas oil, 30.0 per cent; lube distillate, 25.0 per cent; asphalt, 43.0 per cent; loss, 2.0 per cent.

Gas Oil

Gravity, 23.5; flash, 275 degrees F.; viscosity SU at 100 degrees F.; 66; pour test, 0 degrees F.; Lube distillate; gravity, 18.0; flash 425 degrees F.; vis. SU at 100 degrees F., 1060; vis. SU at 210 degrees F., 71; pour test, 0 degrees F.

Asphalt

Specific gravity at 77 degrees F., 1.018; penetration at 77 degrees F., 105; ductility at 77 degrees F., 110 plus; flash point, 650 degrees F.; soluble in GS2, 99.8 per cent.

The following comparison is made of this crude with that of Smackover:

Mississippi—Gasoline, ——; gas oil, 30.0 per cent; lube dist., 25.0 per cent; asphalt, 43.0 per cent; loss, 2.0 per cent.

Smackover—Gasoline, 10 per cent; gas oil, 35 per cent; lube dist., 27 per cent; asphalt, 25 per cent; loss, 3 per cent.

Another Large Mississippi Block Believed for Gulf

Jackson, Miss.—Gordon S. Bowdish, who recently turned four large blocks of acreage in Southeast Mississippi and Southwest Alabama, to Gulf Refining Company, has just taken over mineral leases on more than 107,000 acres of South Mississippi in six counties from Wilbe Lumber Company and the Trenton Lumber Company, subsidiaries of Finkbine Lumber Company. It is believed that Bowdish will turn the acreage to Gulf Refining Company.

The leases are divided among the six counties as follows: Pearl River County, 7761 acres; Jackson County, 1037 acres; George County, 7320 acres; Stone County, 55,360 acres; Simpson County, 4990 acres, and Rankin County, 30,918 acres.

The consideration was $2000 and drilling of a test by April 1, 1933. If a test is not drilled by that time rentals of $9600 on the tract must be paid, which shall operate as a rental and cover the privilege of deferring starting of the well. This may be done for nine years, but if the test is not then drilled the leases revert back to the assignors.

Southeastern States Field Developments

MISSISSIPPI

Completions

Company, Well and Location	Initial Production Bbls.	Depth
HINDS COUNTY (Jackson)—		
Ridgeway & McGehee, Mosal 2, 24-6-1e	¶31¼	2498

New Operations

HINDS COUNTY — Jackson O&G Co., Mayes 4, 1400 ft e and 211 ft s nwc Sec. 1-5-1e.

RANKIN COUNTY—Home Oil Prod. Co., South Jackson Land Co. 1, 85 ft s and 130 ft w nec nw nw Sec. 23-5-1e.

Wildcat Drilling Report

(Wells shut down not included)

CHICKASAW COUNTY — Hightower & Golsan, Fleming 1, 20-13s-3e, owdd, co td deepen, td 1600 ft.

LAMAR COUNTY—Stauffer & Kouri, Trs., Bond 1, se ne 18-2n-14w, dr 2502 ft.

MONROE COUNTY—P. J. McAlpine et al, Chas. Rye 1, se nw 22-15s-16w, dr 1475 ft.

NOXUBEE COUNTY — Thompson O&G Co., Donahue 1, 25-16n-17e, rep dk, td 1735 ft.

ALABAMA

Completions

MOBILE COUNTY—
Ohio Oil Co., Bethel 1, 34-3s-2w... * 5681

Wildcat Drilling Report

(Wells shut down not included)

LAMAR COUNTY—P. J. McAlpine et al (DeSoto O&G Corp.), Gardner 1, nw nw 22-15s-17w, bailed with heavy show 26.5 grav. oil at 3125-37 ft in sand, dr to 3147 ft, picked up another sand, arr test again, td 3148 ft shale (Mississippian).

MOBILE COUNTY—J. C. Prine et al, M. & O. Ry. 1, se ne sw 33-2n-4w, fsh hung ds, td 2612 ft.

WASHINGTON COUNTY—South Ala. O. & G. Co., St. Stephens A-1, 26-7n-1w, rig.

TENNESSEE

CHESTER COUNTY—Gilmore et al, Scott 1, dr hd rock 2230 ft.

FLORIDA

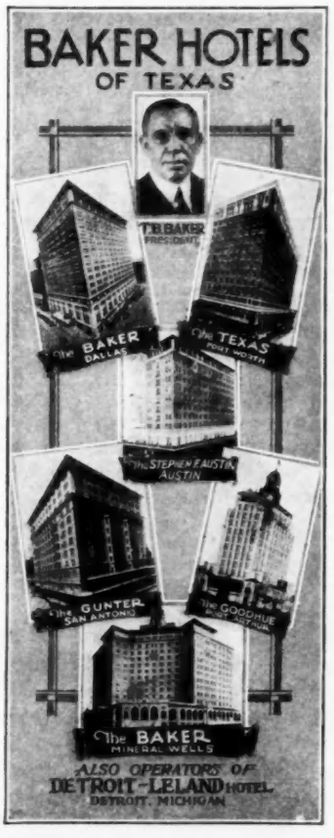
Wildcat Drilling Report

(Wells shut down not included)

WALTON COUNTY—Calumet Co., Walton L&T Co. 1, se ne 7-1n-17w, dk pat. Oil City Corp., Walton L&T Co. 1, ne nw 12-1n-19w, fsh rock bit that twisted off, td 5342 ft.

Carter Oil Company Core Tests South Mississippi

Jackson, Miss.—Five shallow core drill tests in which a Sullivan light unit was used have recently been completed on a block of approximately 10,000 acres held by Carter Oil Company of Tulsa, in Union County, Southwest Mississippi, centering in township 6 south, range 2 east. The tests are said to have gone to approximately 300 feet. Geological work on this block was under direction of E. V. Whitwell. This block was assembled about one year ago by Conrad Lambert and C. C. King of Tulsa, who are said to have been influenced in taking the acreage by kaolin beds in the Wilcox.



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EASTERN STATES

Completions

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
Forest Oil Corp., Fee 107-108-109-110	Pressure	....
Forest Oil Corp., Fee 111	2	....
Forest Petroleum Corp., Fee 116	2	....
Forest Petroleum Corp., Fee 117	2	....
Forest Petroleum Corp., Fee 118, 119, 120	Pressure	....
Forest Petroleum Corp., Fee 121	2	....
Forest Petroleum Corp., Fee 122	2	....
Forest Petroleum Corp., Fee 123	2	....
Forest Petroleum Corp., Fee 124-125-126-127-128-129	Pressure	....
Sloan & Zook, Fee 38	17	....
Sloan & Zook, Fee 39	Pressure	....
Sloan & Zook Petroleum Co., Hazlewood	Pressure	....
Bovaird & Hamlin, Rew 51	2	....
Freeman & Stuckel, Freeman 45	2	....
M. J. Franks, Franks 6	3	....
South Penn Oil Co., Melvin 304	5	....
Andrus & McDowell, Bingham 326 tr 137	3	....
J. W. Looker, Willets 34	2	....
Lincoln & Brink, Fee 52	2	....
Corwin & Gallagher, Corwin 16	4	....
Bradford Producing Co., Hifler 8	4	....
L. P. Mullhaupt, Quintruple 6	4	....
R. O. Landers & Co., Landers 12	2	....
J. H. Dempsey & Co., Gill 4	2	....
Benson & Co., Bovaird 3	2	....
Harter & Co., Kinley 7	2	....
CLARION-VENANGO FIELD—		
Dale Grant Gas Co., Songer 1	2	....
J. B. Berry Estate, Brevort 54	Pressure	....
CENTER-MIDDLE FIELD—		
T. H. Kervin Jr., Kapp 1	2	....
Sloan & Zook, Hazlewood 7	2	....
C. D. Henline, Moody 4	2	....
Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Grossman & Lloyd, Grossman 1	*	....
TIOGA-WAYNE COUNTIES—		
Goebel & Co., Burdette 2	¶2½	....

NEW YORK

ALLEGANY COUNTY—		
Forest Oil Corp., Fee 84	2	....
Forest Oil Corp., Fee 85	2	....
LeSuer Oil Corp., Fee 27	12	....
George Misser, Misser 3	2	....
G. W. Smith Estate, Smith 8	4	....
Jacob Meridian & Co., Meridian 11	2	....
Dusenbury & Co., Champlain 8	Pressure	....

WEST VIRGINIA

CABELL COUNTY—		
Standard Ultramarine Co., Fee 1	¶½	2975
CALHOUN COUNTY—		
Conservation Oil & Gas Co., Kerby 2	¶¼	2173
RITCHIE COUNTY—		
Mary Osborn Oil Co., Osborn 2	4	2060
ROANE COUNTY—		
K. M. Hunt & Co., Eppling 1	¶¼	1880

SOUTHEASTERN OHIO

MORGAN COUNTY—		
Fike & Co., Russell 20	1	330
John Cary & Co., Taylor 11	4	220
John Cary & Co., Taylor 12	1	235

CENTRAL OHIO

BELMONT COUNTY—		
A. C. Peters & Co., Mann 1	¶½	1901
COSHOCTON COUNTY—		
The Preston Oil Co., Rine 2	10	3173
LICKING COUNTY—		
Emerald Petroleum Co., Cochran 3	5	766
MUSKINGUM COUNTY—		
Palmer & Geisinger, Williams 1	*	4085
TUSCARAWAS COUNTY—		
Frey & Co., Weaver 3	¶1	5111

NORTHWESTERN OHIO

WYANDOT COUNTY—		
Erie Oil & Gas Co., Brown 2	2	....

ILLINOIS

CRAWFORD COUNTY—		
Frank Allison & Co., Weartsbaugh 1	*	....
Watson & Co., Wilbert 5	1	1000
CLARK COUNTY—		
A. M. Myers & Co., Endsley 1	¶¼	485

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
DAVIESS COUNTY—		
Johnson Oil & Ref. Co., Vanover 3	75	934
HOPKINS COUNTY—		
Marshall & Co., Lavan 1	¶½	....
NELSON COUNTY—		
Highland Pet. Co., DeCrouch 1	¶1½	....

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MICHIGAN FIELD

Expect Action in Month on Gas Line Petitions

Mt. Pleasant, Mich. — Applications of three companies seeking permission to build natural gas pipe lines from the Central Michigan field to different Michigan cities were heard during the week by the State Public Utilities Commission in Lansing. A decision by the commission on the applications is not expected before 30 days.

West Michigan Gas Company, Michigan Natural Gas Line Company and Michigan Natural Gas Company, had applications before the commission. Another company, Michigan Construction Company, is to present an application at a later date.

West Michigan Gas Company and Michigan Natural Gas Line Company asked for permission to issue $80,000 worth of preferred stock to build a pipe line from the Mt. Pleasant field to Big Rapids and Reed City (Michigan cities). Later these companies plan to extend their systems to other cities, it was claimed.

John L. Borden of Chicago, who is interested in the two companies, told the commission that he had spent $16,000 in investigating the Central Michigan field and is convinced that there is a proven reserve of 25 billion cubic feet of gas in the Broomfield and Vernon (Isabella County) areas and the Clare County area while he said his engineers estimated the total reserve in the state at 125 billion cubic feet.

Michigan Natural Gas Company, a Mt. Pleasant organization, said to be backed by powerful New York City financial interests, seeks to build a line from the Central Michigan field to Saginaw, Bay City, Flint and Pontiac. A. Hamilton Garner and H. Harper McKee, members of the geological engineering firm of Brokaw, Dixon, Garner and McKee, testified for this company.

Mr. McKee said $200,000 which will be spent in exploration will be only a small fraction of the money in wildcatting if the application is approved.

Testimony was placed in the official record of the hearing that Public Utilities Holding Corporation of New York is in-

terested in Michigan Natural Gas Company, said to be financially allied with Chase National Bank of New York.

R. A. Smith, state geologist, testified that according to an estimate made in July, 1931, the field was capable of producing in excess of 15,000,000,000 cubic feet over a period of years. This storage, he said, would be sufficient to warrant the building of pipe lines.

Michigan Construction Company, which as yet has not had its pipe line application heard, seeks to build a line from the local field to Detroit.

John W. Smith, Detroit councilman, appeared before the commission, in a protest against the awarding of the applications to any companies seeking to build lines to other Michigan cities other than Detroit, claiming that if such lines were built the great Detroit market could not be served because there would not be sufficient gas for all of the other cities as well as Detroit. Detroit, according to present estimates, has a natural gas market (industrial and domestic) of between 40 and 60 million cubic feet daily.

Acid Treatment Increases Midland County Well Flow

Mt. Pleasant, Mich.—Walter L. McClanahan Inc.'s Schaffer 1, Midland County, Greendale Township, SW SW SW Section 12, which was drilled into the Dundee limestone about six weeks ago with an initial production of 125 barrels was boosted to 1070 barrels a day this week when treated with acid, a special solution developed by Dow Chemical Company of Midland, Michigan. The well flowed 750 barrels the second 24 hours after treatment and after five days was producing better than 500 barrels a day.

Three Michigan Wells Average Above 1000 Bbls.

Mt. Pleasant, Mich.—Three oil wells with initial production ranging above 1000 barrels and a million and a quarter cubic foot gas well were completed during the week in proven areas while three wildcat tests were abandoned as dry holes.

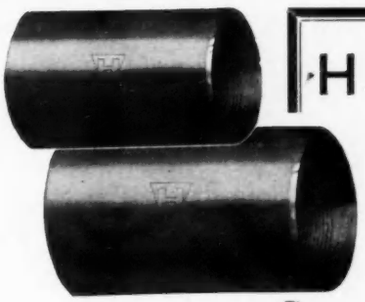
The Pure Oil Company completed the Bolen 2 and Cassaday 3, the first for 1300 barrels a day and the second for 1325 barrels, both wells being in the proven east pool, Midland County, Greendale Township, Section 16. The same company also made a good strike in Section 9, same township, on the Bernard B-5, good for 1200 barrels initial.

In Isabella County, Broomfield Township, Section 9, Isabella Oil Development Company brought in a gas well on the Keeler-Mitchel 3, good for one and a quarter million cubic feet. This marked the twenty-seventh gas strike in the Central Michigan district bringing the daily potential open flow to approximately 111,000,000 cubic feet.

Atha Drilling Company has abandoned State Bank 1, Midland County, Ingersol Township, SW SE Section 21, after going to 4631 feet for a deep test of the Sylvania. It was tested for several days for gas. The operators, however, decided that the well did not have commercial potentialities. The same company is plugging Murphy 1, Saginaw County, Richmond Township, SW NE Section 22, as a dry hole at depth of 3336 feet. It failed to show 116 feet in the Dundee limestone.

Webber will abandon the Kirchner 1, Saginaw County, Tittatabwse Township, Section 15, which proved dry in the Dundee at 3565 feet.

Pure Oil Company is building a rig in Midland County, Greendale Township, Section 35, on the Yost et al lease, which it is reported will be made a deep test. The location is about three miles south of the proven east field. A mile east of the location Walter L. McClanahan, Inc., recently drilled Caywood 1, but it failed to produce in the Dundee lime. The test is shut down but as yet has not been



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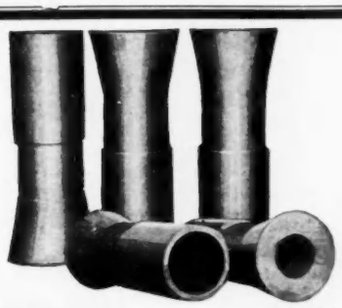

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plugged. The operators have indicated that it might be made a deep test.

With the demand for Michigan crude somewhat stronger than in the past, inside locations are being drilled up faster than at any time in recent months. The Pure Oil Company which plans to start operation of a new refinery in Midland, September 1, is doing the bulk of the drilling. This week the company made seven new locations. The refinery will use between 2000 and 3500 barrels of oil daily, according to announcements.

Two important wildcat wells are being drilled in this district. American Natural Gas Company is putting down a test for natural gas in Mecosta County, Sheridan Township, Section 10 and the Theodore Oil Company is drilling a test in Clare County, Greenwood Township, Section 35, for oil.

Michigan Field Developments

New Operations

MIDLAND COUNTY—Michigan Gas & Oil Co., Bond 2, Greendale Twp, se se ne Sec. 12. Pure Oil Co., Moffett 1, Greendale Twp, ne ne se Sec. 14; Hanrick A-1, Greendale Twp, ne se Sec. 14; Yost et al 1, Greendale Twp, sw Sec. 35; Purtell 6, Greendale Twp, ne nw Sec. 15; Mullet 6, Greendale Twp, ne Sec. 15; Lilly 3, Greendale Twp., ne Sec. 18; Kidder 2, Greendale Twp, ne Sec. 17; Harris et al, Greendale Twp, Sec. 15.

Completions

Company, Well and Location	Initial Production Bbls.	Depth
MIDLAND COUNTY—		
Pure Oil Co., Bolen 2, Greendale Twp, nw Sec. 16	1300	3574
Pure Oil Co., Bernard B-5, Greendale Twp, se se Sec. 9	1200	3570
Pure Oil Co., Bernard B-4, Greendale Twp	500	....
Pure Oil Co., Cassady 2	500	....
Pure Oil Co., Cassady 3, Greendale Twp, nw Sec. 16	1325	3565
Atha Drilling Co., State Bank 1, Ingersoll Twp, sw se Sec. 21	*	4631
Conover & Co., Reimenschnider A-1	10	....
ISABELLA COUNTY—		
G. C. Hanners, Keeler-Mitchell 1	¶7½	....
Isabella Oil Dev. Co., Keeler-Mitchell 3, Broomfield Twp, c sw ne Sec. 9	¶1¼	1381
SAGINAW COUNTY—		
Atha Drilling Co., Murphy 1, Richmond Twp, sw ne Sec. 22	*	3336
Webber, Kirchner 1, Tittatabwse Twp, Sec. 15	*	3565

Wildcat Drilling Report

(Wells shut down not included)

MIDLAND COUNTY—Pure Oil Co.'s Yost et al 1, Greendale Twp, Sec. 35, rig. L. G. Thompson's Newland 1, Lee Twp, sw se Sec. 19, dr 1385 ft.

ISABELLA COUNTY—E. S. Hammond's Graham 1, Chippewa Twp, nw nw sw Sec. 22, dr 150 ft.

CLARE COUNTY—Theodore Oil Co.'s Thompson Bros. 1, Greenwood Twp, se sw ne Sec. 35, dr 1670 ft.

MECOSTA COUNTY — American Natural Gas Co.'s Buzard 1, Sheridan Twp, se se se Sec. 10, dr 1394 ft.

GRATIOT COUNTY — Miller & Coombs' Askergrad, Elba Twp, Sec. 9, dr 300 ft.

New Equipment for the Field

MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼

1. Slush Pump Piston

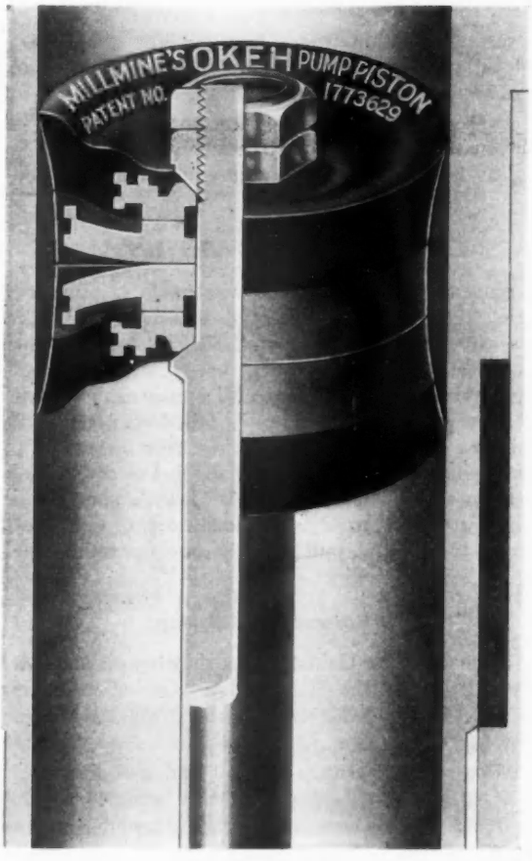
TEXAS RUBBER & SPECIALTY CORPORATION

Texas Rubber & Specialty Corporation, 803 Franklin Avenue, Houston, offers a number of interesting features in the improved Okeh slush pump piston, which has recently completed a series of comparative field tests on wells at various depths.

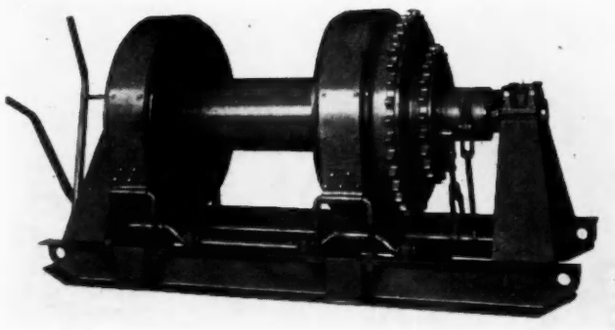
The Okeh hydraulic pump piston employs the same principles as the leather plunger in an automobile tire hand pump, it having a flexible rubber lip on each end to spread against the walls of the cylinder as resistance starts so that no air is allowed to pass. The design is such that the heavier the load the more firmly the lips expand against the cylinder walls.

In this piston high density forged carbon steel backbone is employed, particularly to prevent the pistons from getting loose on the rods. Another step employed in keeping the piston tight is that of applying them direct on the rods and grinding the piston rod to a ground joint fit. There is a steel to steel contact between the shoulder on the rod and the shoulder on the holding nut. The soft tough abrasive resisting rubber used is bonded directly to the steel backbone of the piston. This bonding process is done in the rubber factory of the manufacturer.

The general shape of the Okeh Piston is cylindrical with concave cup leather shaped ends presented to the pressure. These concave ends present lips which seal to meet varying pressure conditions.



Okeh Pump Piston



National Tubing Hoist

2. Tubing Hoist

THE NATIONAL SUPPLY COMPANIES

The National Supply Companies announce a new Type CF Tubing Hoist, of modern design, light weight and extremely rugged construction. It has been developed to meet the demand for a stronger hoist of this type, and is particularly suitable for concrete derrick floor installations.

It is a compact, self-contained friction clutch unit with a rated line pull capacity of 18,000 pounds, and suitable for use with non-reversing prime movers through either standard rigs or reduction gears.

The frame is of all-steel welded construction, exceptionally strong and rigid. Bearing boxes welded in the frame are permanently in line.

One of the features of this hoist is the electric welded steel drum, light in weight but possessing excess strength. Because of the welded construction, flanges cannot spread, and the drum unreels freely with a light line load.

Two demountable, cast iron, brake rims are bolted to the drum flanges, providing ample braking capacity for lowering rods or tubing with speed and safety. The single cone type clutch is designed to transmit high torque with low unit pressures. Hycoe lining is used for both brakes and clutch.

Alemite lubrication is used throughout.

The Type CF Hoist offers, at a moderate cost, ample capacity, great convenience and extreme serviceability.

— — — — — — ***MAIL COUPON*** — — — — — —

THE OIL WEEKLY,
Houston, Texas, U. S. A.

Please see that I am supplied, without obligation, additional information on New Equipment Items Nos._____ described in the August 29, 1932, issue of THE OIL WEEKLY.

Name . . . . . .

Company . . . . . .

Address . . . . . .

HERE'S STRENGTH!

never duplicated before in a pipe wrench

IMPROVED—mightier than ever — TRIMO breaks all records, wins all tests for strength.

Give your TRIMO distributor the opportunity to prove these facts, if there is in any doubt in your mind. For actual tests are proving to the complete satisfaction of the oil industry that the improved and mightier TRIMO wrench is the strongest tool of its kind ever made.

Strengthen your pipe wrench equipment with TRIMO.

TRIMO
Pipe Wrench

Made for half a century by
TRIMONT MFG. CO., Roxbury (Boston), Mass.

3. Oilproof Cord

THE OKONITE COMPANY

In certain types of service portable cords are subjected to the continual attack of oil resulting in deterioration not only of the outer coverings, but eventually of the insulation. To meet this condition The Okonite Company of Passaic, New Jersey, has developed a full line of portable cords and cables having a special outer sheath which is impervious to the destructive action of oil or grease. This line of cords and cables is called "Oilproof Okocord."

As the name implies, Oilproof Okocord possesses all the good qualities of the Okocord line plus continued resistance to oil, thus rendering it highly suitable for use around machine shops, garages, refineries, oil wells, etc. Strong sunlight and ozone also has little effect on this cord.

Rotary and Dock Hose

Houston Oil Field Material Company, 1816 Nance Street, Houston, Texas, announces deliveries on the new Champion All-Steel Rotary and Dock Hose, manufactured by Bettis Sales Company, Houston, Texas. The former company is exclusive distributor in the Gulf Coast territory.

The new Champion hose is distinguished by a new type of swing joint which reduces the number of parts per joint from 54 to nine, greatly simplifying the assembly. The new joint has no bolts, nuts, ball bearings, leather cups or spreaders. It may be assembled or disassembled instantly by use of a pair of pliers only. The two halves of the joint are securely locked to withstand full rated pressures. The rotary hose is tested to 6000 pounds, and the dock hose is tested to 1000 pounds pressure. The rotary hose is made in the seven-joint type for Mid-Continent use, and the dock hose is made in the usual 50-foot lengths, which may be extended to any desired length.

The new Champion rotary hose will be about one-third lighter than the old style Champion hose. The Champion dock hose will weigh only slightly more than one half as much as rubber hose of same size.

Due to construction of the new swing joint, either type of Champion hose swings freely and can not bind or foul.

Unusual Pipe Cutting Job

An unusual pipe cutting job was made last week in the Refugio, Texas, field, when Hall & Lowrey Iron Works, Inc., of Goose Creek, recovered 8933 feet of 2½-inch external upset tubing with only three cuts. This job was cutting tubing from the Edwin M. Jones record depth hole for this territory, which recently failed to produce from a sand below 9000 feet. The cutting crew used 500 feet of 1¼-inch pipe with a 2½-inch Hall & Lowrey cutting tool on bottom and a 2½-inch Hall & Lowrey spear above the 1¼-inch, attached to 2½-inch drill stem, which allowed the crew to cut and pull both in one operation.

Government Oil Map

A new map of the United States showing oil and gas fields has been issued by the United States Geological Survey and is available from the Director of the Geological Survey at a cost of $1.00. Appropriately colored, the map shows oil and gas fields, refining centers and oil and gas pipe lines on a scale of 40 miles to the inch, the map being 49 by 77 inches over all; the base shows state and county boundaries. Included are recently completed gasoline lines and natural gas lines from the Mid-Continent to the West and Middle-West.

NEWS *from the* *Industry's* EQUIPMENT MAKERS

Keeping in touch with developments with Manufacturers and Supply Dealers

Black, Sivalls & Bryson Move to Oklahoma City

Black, Sivalls & Bryson, Inc., has moved its general offices from Bartlesville, Oklahoma, to its own new office building, located at 2131 Westwood Boulevard, Oklahoma City. The general offices of the company and its manufacturing subsidiary are now consolidated in the same building.

The general offices of this company have been located in Bartlesville since 1904. Because of the erection of the American Tank & Equipment Corporation's new plant at Oklahoma City, it was decided to merge the general offices of the two companies for greater efficiency and economy. Furthermore, the present new quarters are more accessible and convenient to nearly all points in the Mid-Continent field, and it is the logical location for a supply company whose business extends from Calgary, Canada, on the north to the Gulf of Mexico on the south.

Several years ago Black, Sivalls & Bryson, Inc., purchased the American Tank Company of Oklahoma City, and built a new, modern welding plant, which building itself is unique in that it is an all welded structure. This plant is the only one west of the Mississippi River, which is in position to fabricate and anneal high pressure, high temperature vessels used in the refinery industry.

In addition to the mammoth shop, the company has built and maintains the largest heat treating oven west of the Mississippi which is 80 feet long, of sufficient length and lize to house a Pullman car.

The business of the plant has been increasing as users of that class of equipment in the Mid-Continent field have become more acquainted with the high class quality welded vessels which are being fabricated. The name of the subsidiary company was changed to American Tank & Equipment Corporation because the company was manufacturing the Improved American Oil & Gas Separators, high pressure vessels, and other equipment, in addition to the welded tanks. The parent company manufactures wood, and bolted steel tanks. The entire line is distributed through branches conveniently located to most active fields.

The new office building of Black, Sivalls & Bryson, Inc., and its manufacturing subsidiary, American Tank & Equipment Corporation

Allis-Chalmers Tractor Wagons for Iraq Pipe Line

The track-type trailer wagon shown in the accompanying illustration is one of 26 which the Allis-Chalmers Manufacturing Company, Milwaukee, is shipping to Asia Minor for pipe line construction work. The same order, placed by Iraq Petroleum Company, also called for 11 track-type tractors.

This equipment is to be used in the construction of a single pipe line from Kirkuk, north of Bagdad, to the Euphrates River, and two lines from there westward, one going to Tripoli and the other to Haifa on the Mediterranean. These lines pass through Iraq, Syria, part of Arabia and Palestine.

The new 30-ton Allis-Chalmers pipe wagon is equipped with 15-ton capacity drop forged tracks, similar in design to those used on Allis-Chalmers track-type tractors. Overall length of the wagon is adjustable from 16 feet 10 inches to 19 feet 10 inches without a front carrier, and from 22 feet eight inches to 25 feet eight inches with a carrier.

A rear drawbar permits the attachment of similar units to be operated in tandem, or to form one unit of double carrying capacity.

Weight is approximately 8800 pounds without the front carrier and 9800 pounds with carrier.

Type of Track-Type Trailer Wagon Shipped to Iraq by Allis-Chalmers Manufacturing Company

DON H. SWINDLER, for the past five years factory representative for J. P. Ratigan, is now representing Kibele Manufacturing Company of San Antonio, Texas, at Houston and in adjacent territory. Swindler will be sales and service engineer for the complete line of Kibele slush pump pistons, well swabs and other specialties.

JOHN R. RILEY of American Iron and Machine Works, who for the past several months has been in East Texas, is now on a three weeks business trip through the Rocky Mountain territory, visiting principal points including Denver and Greeley, Colorado, also Casper, Wyoming. He plans to stop at McPherson and Russell, Kansas, for a few days.

J. J. FERLIN, formerly manager of California Engineering and Manufacturing Company, and later with Calmec Manufacturing Company of Los Angeles, is now with Madsen Iron Works at Los Angeles, in charge of sales of oil country specialties. They will handle items used by both producing and refining branches of the industry.

Squeaks *from the* BULL WHEEL

Traffic cop: "Say, lady, where's the fire?"

Lady Speeder: "In your eyes, you great big gorgeous patrolman."

Insurance Agent: "Now that you are married you will want to take out a policy."

Newlywed: "No, I don't think she is going to be dangerous."

I'm afraid Stella regarded her marriage only as a means to an end.

Yes, and she is already at the end of her husband's means.

The big man was telling the interviewer how he got started in his profession. "When I was an infant, my good folks were undecided what I'd become when I grew up, and they struck on a plan. They fetched an apple, a prayer-book and a dollar bill. If I played with the apple, a farmer I'd be—if I'd play with the prayer-book, I'd be a parson—if I'd play with the dollar bill, I'd be a banker. They left me alone for a few minutes, and when they entered the room later I was eating the apple, reading the prayer-book, and I had put the dollar bill in my pocket—so that's how they made me a politician."

Why did MacGregor fish without any bait on his hook?

Because he and O'Brien agreed that the first one to catch a fish would pay for the hire of the boat.

"Pa, what is meant by being in dire straits?"

"When a person is so hard up that he can't even buy gas for his auto."

You say someone has taken money from your pocket? Maybe it was your wife.

No, some money was left.

So that famous circus juggler and tight-rope walker has gone crazy?

Yes, he tried to balance the family budget.

"Did you know the defendant, Rastus?"

"Ah jes had a logical acquaintance wid him."

"What do you mean by logical acquaintance?"

"Well, us both belong to the same lodge."

My husband has no idea what I go through when he snores.

Mine never knows how much he has in his pocket, either.

"Sit down, sonny, you have shown good manners long enough."

"It ain't good manners, doctor, it's a boil."

How does Snigglefritz like his new typist?

She's just his type.

Kind Gentleman (to little boy eating an apple): "Look out for the worms, sonny."

Little Boy: "When I eat an apple, the worms have to look out for themselves."

Summer Boarder—Oh, I'd just love to be a farmer, to live with the blue sky overhead!

Farmer Jones—Yes, that would be all right if the blue sky was the farmer's only overhead.

A water pipe in the bathroom had burst, and the head of the house was doing his best to stem the flowing tide with his hands, pending the arrival of the plumber.

Suddenly his son burst into the bathroom and said excitedly: "You can take your hands off the leak now, dad."

"Thank goodness," exclaimed the father. "Is the plumber here at last?"

"No," was the reply, "but the house is afire."

A man from Manhattan was peering into the depths of the Grand Canyon.

"Do you know," asked the guide, "that it took millions of years for this great abyss to be carved out?"

The man from Manhattan was tremendously impressed. "You don't tell me," he commented. "Why, I didn't know it was a government job."

Little Betty returned from her first visit to Sunday School eating candy.

"Who gave you the sweets?" asked her mother.

"I bought them with the penny you gave me," said Betty. "I met the minister at the door, so I got in for nothing."

Customer—Your dog seems very fond of watching you cut hair.

Barber—It ain't that; sometimes I snip off a bit of an ear.

"Doesn't your wife miss you when you stay out till three in the morning?"

"Occasionally; but usually her aim is perfect."

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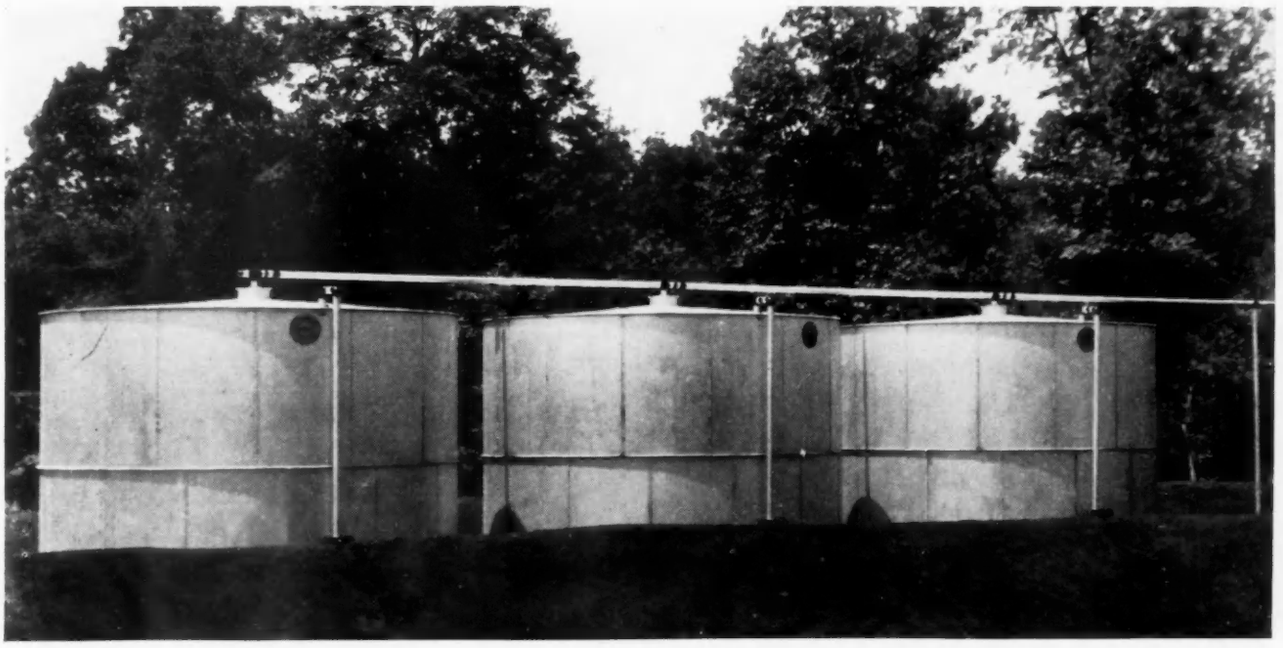


Three 1,000-Bbl. Maloneys used by Superior Oil Corp. of California on the Pritchard Lease, south of Gladewater, Texas.

VAPOR-PRESSURE MALONEYS Reduce Lease Evaporation

The most practical of all methods for reducing evaporation losses from leases is the use of our *Vapor-Pressure* Flow and Stock Tanks.

These tanks are made of not less than 12-gauge, rust-resistant Keystone Copper Steel, with heavy 2″ angle ties and reinforcements, wide gussets on ties and ladders, efficient combination valves set at 16 ounces pressure and ½ ounce vacuum, and coated with our special aluminum paint, made with an unusually durable vehicle containing waterproof and alkali-proof Inhiburine. This construction minimizes temperature variations within the tanks, restricts breathing and insures excellent service.

MADE OF KEYSTONE AMERICAN

"Alone in Quality"

MALONEY TANK MFG. COMPANY, 38 North Peoria Ave., Tulsa, Oklahoma

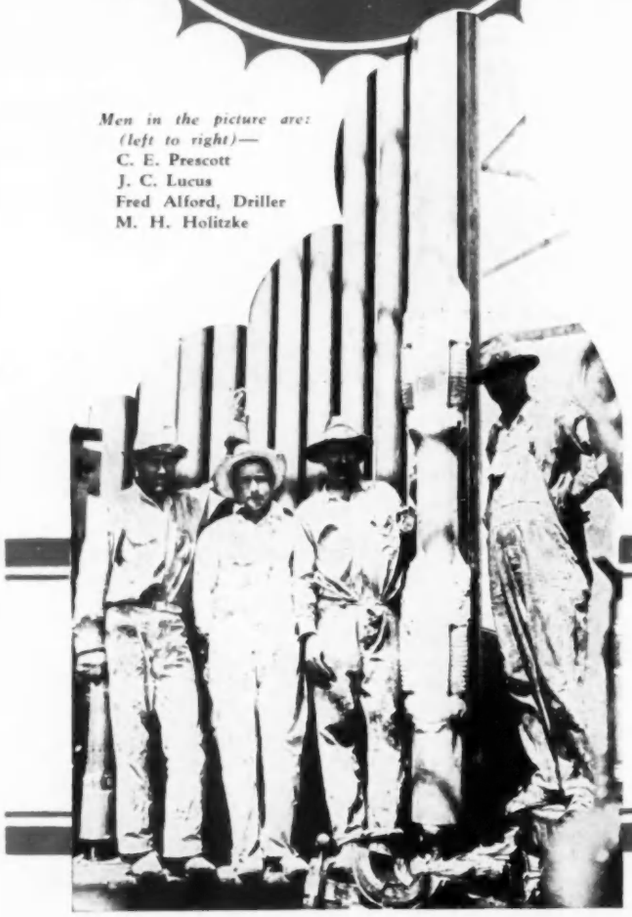
Distributers at All Principal Petroleum Points

Packed in Steel-Bound Crates for Export

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

Proof of Hughes 3 POINT REAMER Performance

3780 FEET OF STRAIGHT HOLE With Original Set of REAMER CUTTERS



Men in the picture are: (left to right)—
C. E. Prescott
J. C. Lucus
Fred Alford, Driller
M. H. Holitzke

Photograph shows Hughes 12¼" Double Stage 3 Point Reamer in use by Cranfill-Reynolds at Esperson Dome Field—Well No. 20—Reamer was run in hole every time drill stem went in with either Core Bit, Fish Tail or Rock Bit. One set of Reamers was used from 420 feet to 4200 feet.

This performance record of a Hughes 3 Point Reamer is further proof of

—built in economy.
—minimum wear.
—low upkeep.
—effectiveness of improved reversible cutters.
—new ease in handling.

Hughes Tool Company

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Midland, Texas

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TEXAS

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